





1846. G. O. Thompson
New York (State), Legislature, Assembly

REPORT

from W. H. Van Schaughon

OF A

SPECIAL COMMITTEE OF THE HOUSE OF ASSEMBLY OF THE STATE
OF NEW-YORK,

ON THE PRESENT

QUARANTINE LAWS,

1846.

Presented by Mr. STEVENSON of New-York, on whose motion the following resolution was adopted:

Resolved, That five times the usual number of copies be printed for the use of the Legislature, and 500 extra copies for the use of the Board of Health, the Marine Hospital, and the select committee.

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ALBANY:

CARROLL AND COOK, PRINTERS TO THE ASSEMBLY.

1846.

W. H. Van Schaughon

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No. 60.

IN ASSEMBLY,

January 22, 1846.

COMMUNICATION

From the special committee appointed by the House of Assembly of 1845, transmitting their report on the subject of the Quarantine laws, at the Port of New-York.

ALBANY, }
January 22, 1846. }

Hon. WM. C. CRAIN,

Speaker of the Assembly.

Sir — The undersigned, a committee appointed by the House of Assembly of 1845, on the subject of the Quarantine Laws of the Port of New-York, have the honor to present their report, with the accompanying documents.

Very respectfully,

Your obd't sevt's.


D. E. WHEELER,

C. COMSTOCK,

R. H. HINE,

Committee.

Seal's C.
TRADE
1846



REPORT

Of the select committee in relation to the Quarantine Laws of the Port of New York.

David E. Wheeler, Calvert Comstock and Reuben H. Hine, the select committee appointed by the House of Assembly of 1845, to perform the duties imposed by the adoption of the following resolution :

“ *Resolved*, That a committee of three be appointed to examine the Quarantine Laws of the Port of New-York, to take testimony in relation thereto, and to report the facts and such alterations in the said laws as in their opinion shall be expedient, at the next session of the Legislature,”

Beg leave most respectfully to

REPORT :

That they have devoted all the time and effort to the examination of the very important subject committed to them, which they believed it demanded, and that was necessary to accomplish the objects desired by the patriotic House who gave them the duty to perform.

The petitions presented to the House, complaining of grievances incident to the existing Quarantine laws, were signed by many of the most intelligent and patriotic residents of the city of New-York, men who have advanced in life with the great and rapid growth of the commercial metropolis of this hemisphere, and some of them partakers of the sorrows incident to the yellow fever, in and prior to the year 1822. The wishes and views expressed in the petitions were general, and the Assembly could not appropriate to itself sufficient accurate information, to justify it in making changes which had possibly prevented the pestilence which walketh in darkness from visiting the metropolis since their enactment, and consequently the subject was deferred for the action of a House which should subsequently be elected, equally patriotic, and equally desirous of giving to the petitioners and others, all the privileges they as good citizens could ask.

All efforts to prevent the onward march of pestilence, are fraught with consequences, possibly not inferior to any other, for if wisely directed, they continue to man, what God has made his special care to preserve ; but if injuriously relaxed or improperly imposed, they may be not only the cause of sorrow, but the instrument of death.

When legislation on such a subject is sought, which may directly effect a population of over half a million, and indirectly that of a whole nation, by the loss or preservation of life, the injury or benefit of her foreign and domestic commerce, the question assumes an importance not to be misunderstood, and the men who are to furnish the evidence and advise changes, must summon all their manly virtue and patriotism, or yield to unbecoming fears.

The various theories, which have divided (perhaps equally) the learned medical profession, will naturally remain undecided, for it would be a vain task for the undersigned to attempt to analyze all the learning which has been lavished upon the various questions respecting the yellow fever, its contagious or infectious character, its domestic origin, its aliment of growth, its mode of treatment, and the thousand other questions which have awakened genius to master, or to reconcile testimony which has been taken, to sustain theories which have from time to time been adopted. For truly, though quaintly, does the learned James Tytler, in his treatise on the plague and yellow fever, affirm, that thus far the matter of *fact* seems to be very much obscured ; and the more we investigate, the more we are involved in darkness.

Still, a partial survey of the history of this disease seems necessary in examining the subject referred to the committee ; for conclusions, to inspire confidence, must be founded on fact or based on philosophical principles, and the former must be (imperfect as the history is) the landmark in making enactments which are necessary for the health of man and the least burdensome to commerce. Man's artificial wants, have become necessities of life, and he seeks in all its varied changes the universal productions of the earth, and consequently humanity requires as few restraints as are consistent with sanatory regulations for preventing the awful ravages of pestilence incident to the great commercial relations in the supplying of those wants.

All writers agree that the yellow fever is not the disease of the ancients called the plague, and what Thucydides graphically describes

as appearing among the Athenians, and so dreadfully fatal that its parallel could not be found in the human memory, and the physician administer no relief; nay, they died the faster the closer they attended on the sick, or the disease which visited Holland in 1664, and which, it is believed, took to their long home one hundred and twenty thousand of the inhabitants of London in the subsequent year, (1665.)

The North American Indians were subject to epidemics prior to any English settlement among them, but whether they were before the discovery of the North American continent in 1497 by Sebastian Cabot, history is silent, but it does inform us that after Captain Weymouth, in search for a northwest passage to India, in the employ of Lord Arundel, fell in with a river supposed to be the Kennebeck or Penobscot, in the years 1604 or 1605, and in 1612 and 1613, a pestilence swept off the Indians at such a prodigious rate that the living were not able to bury the dead, and their bones were found several years after lying about the villages where they had resided. The extent of this pestilence was between the Penobscot on the east, and Narraganset on the west. The same disease appeared again in 1616 and 1617, and almost depopulated the country, and subsequently it was ascertained by the English colonists that a French ship had been wrecked on Cape Cod, and the crew principally killed and the goods divided among the Indians. This ship has been considered as the cause of this awful pestilence. "I have discoursed," says the same historian, "with some of the old Indians, that were then youths, who say that the bodies all over were exceedingly yellow, (describing it by a yellow garment they showed me,) both before they died and afterward."

"This pestilence," says a commentator upon this morceau of history, "if the relations are to be credited, certainly determines the disease in question to have been the yellow fever."

If this pestilence was the yellow fever, it is the first raging of that disease now known to man on this continent north of latitude 34, and probably in North America.

Prior to 1494 we find Christopher Columbus, the son of a woolcomber of Genoa, gathering knowledge and appropriating to himself a boldness and spirit of adventure from his trading voyages in the Mediterranean, which drives his ships to the Canary Islands and the African coast. His almost prophetic eye, sees another continent, and in a few short months he is enabled to land at Guana Bay, in the Lucayas Islands, and he takes possession of Cuba and Hispaniola, and

subsequently Jamaica and other islands, but he finds no pestilence and no history among the nations of the yellow fever.

Philosophically, the West Indies should be exceedingly healthy, for they are surrounded by a perfectly pure atmosphere, and most of the islands have bold and romantic mountains, beautiful plains and sweet streams of water, with an almost perennial spring, and yet, immediately upon the establishment of European settlements on the islands, certainly prior to 1721, we find this awful scourge had become a terror not only to European inhabitants but to the natives themselves.

Some have affirmed that the disease was brought to the islands in a Provincale fleet which arrived at Port St. Pierre, in Martinico, from Marseilles, with several bales of Levant goods, which were taken in at Marseilles from a ship then but just arrived from St. Jean D'Arc. Dr. Warren says, that upon opening these bales at Port St. Pierre, this distemper (the yellow fever) immediately showed itself, and many of the people were instantly seized; some died suddenly, some in a few days, some lingered longer; and the contagion still spreading made great havoc at the beginning, and that possibly some peculiar qualities in the air and climate might have fostered and maintained it there ever since. Mr. Hughes, however, asserts that Dr. Gamble remembers that it was very fatal at Barbadoes in 1691, and that it was then called the NEW DISTEMPER, and afterwards (1796) KENDAL'S FEVER, the PESTILENTIAL FEVER — and that it was mostly fatal among strangers, though many of the inhabitants died of it in that and subsequent years.

This account receives confirmation also from Sauvage, who says that the plague is distinguished by different species, among which there is one called the PLAGUE OF SIAM, and that this was brought from Siam to Martinico in the ship Oristame; and from the symptoms described it must have been the yellow fever, and known in Barbadoes in 1691 as the NEW FEVER. These separate accounts evidently imply that the disease was then but lately known, and must have been brought to the islands, or originated in them in consequence of the settlement of Europeans from a more northern latitude, a very different country, and possessing a more northerly constitution.

We have no history of the existence of the yellow fever in the city of New York, prior to 1751, but about this time, according to the testimony of Dr. John Carleton, and Dr. Samuel Bard, it was discovered doing its work of death, and many fell victims to its power.

It appeared again in 1762, 1791, 1793, and 1795 ; in each of these years the disease prevailed in the West India Islands, and in many of the ports on the American continent. The history of the disease is very slight and that even very unsatisfactory, prior to the year 1795. The disease this year had an able historian in Richard Bayley. Some of the physicians of that day insisted upon the importation of the disease, while others, were equally certain that it was of domestic origin. It is certain, however, that during that season vessels arrived from some of the West India Islands, and some were charged with bringing the disease to the city, and proofs were taken to locate its first outbreak at various wharves from these sources. Dr. Bayley takes great pains to show that the disease is peculiarly local in its origin, and attributes it in a great measure to the changes made in the surface of that part of the Island upon which the city was built. He says, "It has been the policy of the corporation of the city, at different times, to make new ground, as it is called, or to sell to others the privilege of doing so, which has considerably increased the dimensions of the city both on the east and on the north side."

"The new made ground is nearly a level, or the descent is so gradual, that it is drained with difficulty ; and we may add that the land of the new made ground is but very little above the mark of high water. * * * The new made ground from Whitehall to Catharine street, along the East River, is on an average four hundred feet in breadth, creating, if one may so speak, fifty acres of ground, all of which is built upon. The ground made on the west side of the city, is about ten acres. The consequences of this mode of extending the city are, no doubt, extremely injurious to the health of the inhabitants ; and it is much to be regretted that measures are not taken to prevent an increase of the evil, for we shall presently see that the late epidemic was rendered particularly malignant and fatal from causes arising in this plan of enlarging the city." Subsequent reasons are given for the disease arising from this great source, and sufficient to convince the author that if not the sole cause, it was the greatest, and yet the account is too meagre of facts in relation to shipping to aid us in our enquiries, and we look for greater aid in the history of the awful calamity of 1798. This may cast a shadow into the future from which a wise man may gather instruction.

The city then contained about 58,000 inhabitants* and they principally resided below the present location of the City Hall. The first

* See table No. 1.

victim of the disease was Melancthon Smith, who died the last of July, his store was in Front street, near Coenties slip, and here he doubtless contracted the disease, and immediately after his death some persons in that vicinity were attacked. The disease, however, did not assume a very malignant character, until the 20th of August, when cases occurred in different streets, and with great violence at the New slip; in John and Cliff streets, and more especially in Rider street and Edens alley.

The health commissioners of that day, addressed a letter to the mayor, on the 8th instant, informing him that in their opinion "the unfinished state of the docks in Front-street, between Coenties and Old slips, had been a source of disease, in that neighborhood, the preceding year, and had occasioned the death of several valuable citizens, and that its present situation was likely to be productive of still greater evils than those of that year;" and that several persons had sickened in the neighborhood of these unfinished grounds with symptoms strikingly characteristic of yellow fever.

Measures were immediately adopted which were deemed most likely to check the progress of the growing malady, but it had taken so deep root that it could neither be eradicated nor checked by human means. On the 12th, 13th and 14th of August, there were showers of rain, and a very heavy one on the 14th, which covered the streets in many places with water, and a vast number were filled with it. The water was not immediately removed and became offensive, and many who were urged by the commissioners to remove the water, disobeyed, and became the first victims to the disease. From this time the number of deaths almost daily increased, and the inhabitants began to leave the city, until from one-third to one-half had left their homes previous to the 10th of November, and yet the whole number of deaths, during this awful calamity, was TWO THOUSAND AND EIGHTY-FOUR; ELEVEN HUNDRED AND TEN MEN, FIVE HUNDRED AND EIGHTY-NINE WOMEN, AND EIGHT HUNDRED AND EIGHTY-FIVE CHILDREN. Many of the citizens who fled were cut off, and consequently the whole number of deaths were probably between TWO THOUSAND FOUR HUNDRED AND TWO THOUSAND FIVE HUNDRED. During this period three hundred and eighty-nine persons were admitted into the Bellevue hospital; and of this number two hundred and five died, and yet the attendants of the hospital, the physicians, nurses and washerwomen, although literally surrounded by pestilence, did not catch the infection. And the boatmen belonging to the health office, who entered the hospital

at all times, and were not only employed in bringing the sick from the city and shipping, but in removing them from place to place, enjoyed a uniform state of good health. Dr. Douglass, one of the assistant physicians, was seized with fever, but three days previous to his being taken sick he slept in a house in the infected district and his sickness was attributed to that cause.

The people in the neighborhood of Coenties slip laid the blame of their sickness to the schooner Fox, which arrived from Jeremie, St. Domingo, between the middle and latter part of July, and hauled to a wharf a little east of the slip, where she unloaded, and upon pumping her out her bilge water was very offensive. In the latter part of July the ship Fame arrived from one of the West India islands, and came to the wharf next below New slip and lay there for some time, and on the 3d or 4th of August her ballast was discharged and she pumped out. In her ballast was damaged coffee, extremely putrid, which, with the water from the pumps, was so offensive to the smell that the neighbors were induced to shut their windows, especially while eating.

On the sixth a number of persons spent the most of the day at Henry Meads' house on the lower corner of the west side of New slip, where the disease appeared first, subsequent to its appearance in Coenties slip, and dined there, and while at dinner they were under the necessity of shutting up the doors and windows, though the weather was very warm, so exceedingly were they annoyed by the stench from this slip. Of this company not one escaped the disease, and two of them died. In the house and the then adjoining houses, eleven persons took the disease, and five of them died. And many of the boatmen whose vessels were in the slip at the same time were also victims to this stench, or the contagion it produced.*

In 1799 there were a few cases, but confined to Old slip, and the streets in the vicinity of the East River.

The city was again visited by this scourge of man in the year 1803, and out of sixteen hundred and thirty-nine reported cases, six hundred and six died of this malignant fever. The first public alarm arose from some fatal cases at Coffee-House slip, and its vicinity. The streets lying near the margin of the river, and some of those in

* For these facts see J. Hardie's account of the Yellow fever in the city of New-York in 1822.

the upper part of the city, which were principally inhabited by the indigent, uncleanly and dissolute, suffered most from the ravages of the disease.

In 1804, seven hundred and eight died with the yellow fever in the city.

In the year 1805, six hundred cases of malignant fever were reported to the board of health; out of this number two hundred and seventy died, and some who left the city died in the country. Dr. J. R. B. Rodgers, the health officer, in an official letter to the board of health, dated December 19, 1805, says "at the Quarantine there have been constantly a considerable number of vessels, from the first of June to the first of October, from 40 to 50 vessels, and on the last day of September, sixty. All of these vessels had lost some one or more of their crews, or had come from a sickly port; twenty-four of them were under the necessity of coming to the public wharf, where some of them lay the greater part of the season; of these a considerable number hove down, others threw out their ballast and cleansed their limbers, some were sheathed or planked, and all of them overhauled more or less; and of the many officers, seamen and workmen, ship carpenters, caulkers, riggers, coopers, sail makers, blacksmiths, &c., NOT ONE was, in the smallest degree, indisposed or took any sickness by connection with these vessels; nor has any of those persons that I know of, been indisposed, except one carpenter who took sick some weeks after he had left the Quarantine ground, and died in the latter end of September in New-York, having exposed himself in the poisoned air of the city. Of the pilots, who had brought these infected vessels into port, and had frequently slept on board of them, very often one night and sometimes two before they came too at Quarantine, not one of them or any of their families have been in the smallest degree indisposed from any connection with such vessel. Of those attached to the health officer's department, boatmen, orderlies and attendants, not one has been sick from any infection, or from any connection with the sick or infected vessels—of the lighters employed in carrying goods to the city or bringing cargoes to vessels at Quarantine, not one of them was, in the smallest degree, indisposed, till the 24th or 25th of September, when one of them was taken with fever, which left him in a few days; another was seized just after the first, and died on the 2d of October. Neither of them had any connection with any foul ship, to which they could attribute the complaint; but they

took it from having had daily intercourse with the eastern part of the city, and from being under the necessity of going into houses and stores in that quarter, and staying longer in them than they had been accustomed to, by reason of the want of hands to receive their goods in consequence of the desertion of that part of the city."

Many physicians, however, insisted that the yellow fever of this season was introduced by a quantity of rags in a vessel from Alge-siras (a town in Spain on the straits of Gibralter), and others insisted that the disease was brought to the city by another vessel. Dr. Rodgers, however, asserts in his report that "the RAGS WERE CLEAN AND PERFECTLY INNOCUOUS. That they had been prepared in the way they always are for the purposes of commerce ; that is, after being first washed clean, dipped into or through a strong lime water or an alkaline solution, then dried and packed in bags or bales. These rags, thus prepared, were shipped some time in the spring from Leghorn, on board of an English vessel for Liverpool or London. The vessel had a health bill from Leghorn, and one also from Algesiras. She arrived here in August, after a passage of sixty-six days of mild weather, during which the hatches were always off in the day time, and the people almost constantly over the bags. The crew was healthy and had been so during the whole voyage, and the rags dry and in good order. When the bags were ripped open, they gave out a white unoffensive powder—this powder was lime. These rags were received on the 13th of August at the end of Coenties slip ; were there from 8 o'clock in the morning until 12 at noon of the same day, and only for the purpose of being weighed ; they were then taken on board of a vessel bound to the eastward. No person received any injury from these rags, nor possibly could, for they were clean and as unoffensive as any article in the city." This able physician and faithful health officer concludes his report by saying, I have now clearly shown, as far as negative proof can go, *that whatever might have been the cause of the late epidemic, it did not arise from any neglect of duty at the Quarantine ground,* NOR DID IT COME THROUGH THAT CHANNEL.

Dr. Hosack, whose reputation as a physician is not bounded by our continent, writes to the board of health, November 15th, 1805 (the same year), that "it has been said that I have departed from the opinion I had heretofore entertained of the origin of the yellow fever, and

that as in the present year NO PARTICULAR VESSEL has been charged with the introduction of it, we were compelled to acknowledge its *domestic* origin, &c. &c. In reply to this misrepresentation of my opinion, I have only to remark that if I had before entertained any doubt of the origin of this calamity, the circumstances attending its appearance in the present season would alone have satisfied me *that it is not the product of our own soil or climate, but is always introduced from ABROAD.* THE INTERCOURSE, I might perhaps say the *unlimited intercourse*, which has existed between the Quarantine ground and this city, by night as well as by day, *sufficiently* accounts for the pestilence of last season (summer), * * * and I will venture to predict that unless our Legislature enacts a law that will make it necessary to quarantine the *captains* of vessels, the *supercargo*s, the *seamen*, their *bedding*, clothing, &c., &c., as well as the vessels themselves, we shall never be secure from danger, and that the now growing commerce of our city will be sacrificed to the repetition of this terrible calamity."

"While I recommend a more strict and efficient quarantine to prevent the introduction of the disease from abroad, I hope it will not be thought that I disregard the attention bestowed by our vigilant police in *preserving cleanliness at home.* It is conceded that the yellow fever, like other contagious diseases, *is never so readily propagated in a pure as in an IMPURE ATMOSPHERE.* Perhaps I may go further, and say that the yellow fever, more than any other contagious disease we know of, *requires* an IMPURE AIR as its CONDUCTOR. But, that the FILTH OF OUR STREETS, *our docks, new made grounds, grave yards, or privies*, have ever GENERATED this species of fever, I cannot believe. I should as readily ascribe the origin of *small pox, measles* or plague, to the dirt of our gutters, as to trace the yellow fever to such sources."

The city is not again visited with the yellow fever until the year 1819, a period of *fourteen years*; and in this year there were sixty-three cases of yellow fever in the vicinity of the old slip, and of this number forty-three died.

In the year 1822 the city was visited again by this awful, yet seemingly inexplicable disease. The city then contained about one hundred and twenty-four thousand inhabitants.* The disease made its appearance on the southwest side of the city, at a point before considered very healthy and impregnable to the attack of yellow fever.

*See Table No. 1.

From the commencement of the disease this year to its close, four hundred and eleven persons were attacked, and two hundred and forty of that number died. The disease appeared at the foot of Rector-street on the 10th of July, and on the 9th of September in Lombardy-street, in the northeasterly part of the city, and not immediately contiguous to the water. About the same time the yellow fever made its appearance in Brooklyn.

These various manifestations of disease spread alarm among the citizens; and the recollection of the past with the earnest appeals of the board of health, induced many of the citizens to seek the fresh air of the country, and the public offices and institutions were removed to remote and sparsely populated portions of the island; and to this is attributed in a very great degree the partial subjugation of the disease. Materials for its destructive work were wanting, and of necessity it died as the fire does for want of fuel.

Its origin became a question of difficulty, and its varied localities added to it.

In the early part of June, 1822, the yellow fever manifested itself in several ports in the West India Islands, with which the city had frequent intercourse; particularly Havana, St. Jago de Cuba, and Matanzas, and subsequently it appeared in Port au Prince, New-Orleans, and Pensacola. In the latter part of the same month the brig Spanish Soldier, brig Abeona, brig Ambuscade, and ship Eliza Jane, arrived at the quarantine from Havana, after a few days passage. The crew and officers of the Abeona and Ambuscade were acclimated to a southern climate, but the Spanish Soldier and the Eliza Jane, respectively, lost two men with yellow fever on the voyage. The cargoes of each vessel consisted chiefly of Havana sugars, in boxes, and it was all brought to the city; 1918 boxes were conveyed in twenty-four lighters, and landed at or near the foot of Rector-street, between the 28th of June and the 9th of July. The lighters were generally loaded before noon. During this period the weather was very warm, and most if not all the sugar put into the holds of the lighters. On the 8th day of July, the United States brig Enterprise arrived at quarantine from a cruise. Twenty days previous to her arrival she had been three days off the Moro-Castle at Havana, and she remained eight days at Charleston, South Carolina.

Lieut. Coxe was taken ill with the yellow fever the day after her arrival at Charleston, and died on the first day of July; and ten persons were sick of yellow fever on her arrival here. On the ninth of July thirteen persons were received into the Marine hospital from the brig. On the 11th the number had increased to twenty, and all the men ordered ashore, and the brig thoroughly cleansed and whitewashed, and her hold daily fumigated with nitrous oxide gas, and on the 14th, the men becoming insubordinate, were ordered aboard the brig, and cases subsequently occurring, induced the health officer to again order the crew on shore.

Other vessels arrived from the West India Islands, and lay at or near the foot of Rector-street.

Date.	Name of Vessel.	Wharf.	Where from.	Term of quarantine.
June 18.	Ship Chase,	No. 3, N. River,	St. Croix,	4 days.
20.	Brig Patriot,	do do	Curacoa,	4
20.	Schooner Edgar,	Edgar's basin,	Augustura,	4
25.	do Florida,	Bt. Carlile, and Rec- tor-st.	Havana & } Flor. Cape }	4
25.	Ship Shamrock,	No. 7, N. River,	Matanzas,	4
25.	do Gen. Carrington,	11, do	N. Orleans,	4
July 6.	Brig Fanny,	3, do	Curacoa,	4
15.	Ship Elias Burgher,	3, do	St. Croix,	4
17.	Schooner Nile,	7, do	P. au Prince,	10

It was said, and doubtless with truth, that the Florida had carried one hundred Spanish soldiers to Havana upon the surrender of the Territory of Florida to the United States, where the crew were infected with the yellow fever, and that several of them had died, and that upon their arrival (return) at Pensacola they had communicated to the inhabitants of that city a disease which history records as unexampled for its malignity.

Since the year 1822 the city has been free from any epidemical yellow fever; yet some of our eminent physicians have expressed the opinion that deaths occur every year in the city, of a disease, if not the yellow fever, one which has all its characteristics except its epidemic, contagious, or malignant form.

No city in this State, perhaps none in the Union, has grown as rapidly as Brooklyn, for the last five years.* It has become one of the largest of our cities, and its proximity to New-York, and the great facilities now afforded for crossing the East river, must always give to it advantages which no other city can possess. A number of ferries extend to it great conveniences, and when it is known that the boats pass the river in about five minutes, and reach and depart from the south ferry and the Fulton ferry in about the same time, from 4 o'clock in the morning to 10 or 11 o'clock at night, it will be perceived that the distance can be more frequently and more rapidly passed than it could be if the East river was solid earth, and at the same time the freshness of the breeze and the cooling influence of the water adds greatly to the inducements of living upon the Long-Island shore. The heights of Brooklyn are immediately opposite Wall-street in New-York, and 90 feet above tide-water, and under the heights is a street with houses and warehouses. On the shore and below the heights a few cases of yellow fever have occurred, and also upon the heights and other parts of Brooklyn. The number, however, has never been great, and no cases have occurred since 1824. In 1823, a vessel came to the wharves of Brooklyn, under the heights, which was afterwards supposed to be infected with the yellow fever; some of its crew being sick on its arrival, they were removed to a house in the immediate vicinity. In their sufferings they attracted the notice of John Wells, who at that time resided upon the heights. He visited the family on his way to the city, and was seized by the disease, and died at his own house upon the heights. Other members of his family were sick, but death took from it only this shining mark, for to speak of him is to praise him, as it has been truly said of him, "*nihil tetiget non ornavit.*" The particulars of this sickness are given in the following letter from his son to one of the committee.

" *New-York, Jan. 15th, 1846.*

" DEAR SIR—I send you the following statement, in compliance with your request before you left the city.

" In the summer of 1823, my father was residing with his family upon Brooklyn heights. About the 20th of September, of that year, while on his way to the city in the morning, he was informed that a family occupying a house below the heights, near the river, were

* See table No. 4.

quite sick, and were in want of proper care and comforts. This house was almost directly below my father's house, which stood above it on the heights. He immediately walked back to the house in which the family was, with the person who gave him the information, to inquire after them, and gave directions to send to his house for any thing that could contribute to their comfort. This took place on Wednesday. He may have again called at the house in his walk to the city the next day, to inquire about them. Some of those who were sick in that house died. They were from on board a vessel which had lately arrived from some port in the West Indies, which was lying at the dock near the house. The cause of the sickness was not then known to him, nor to others, but it was soon afterwards ascertained to be yellow fever. On Thursday he came to the city, and was engaged during the morning in an argument in the circuit court of the United States, and upon its adjournment went to his office. While there he complained of lassitude and debility, which he attributed to the heat of the weather. In the afternoon he went to his house on the heights, and it was observed that he appeared much exhausted. He retired early in the evening, before his usual hour. On Friday morning he was unable to leave his bed, and he was suffering under a high fever. Dr. Ball, of Brooklyn, was immediately sent for, and his illness creating alarm, Dr. Post, of New-York, was in attendance during the day. Dr. Ball, on the evening of that day or on the morning of the next day, pronounced it to be a case of yellow fever. Dr. Post did not then concur, but thought it a case of high billious fever. The discharges from his stomach in vomiting were black, such as attend upon, and distinctly mark yellow fever, and his skin was also quite yellow. He continued very ill during Saturday, and died that night. About this time the sickness in the house under the heights, to which I have referred, and in others in that neighborhood, began to attract public attention. Some persons who had passed in that direction for the purpose of bathing, had been taken sick, and afterwards died, and the attending physicians had pronounced them cases of yellow fever. An investigation was made, by Dr. Ball and other physicians of Brooklyn, into the causes of the sickness at the house referred to, and of the persons who had sickened and died after passing that way, and they declared it to be yellow fever; and in consequence of their advice measures were taken to prevent any further communication with this place, that the disease might not be scattered. Measures were also taken for the removal and purification of the ves-

sel. After the death of my father and the investigation that took place, Dr. Post expressed the opinion that his death was caused by yellow fever. In connection with this statement it may be proper to add, that at the time of the death of my father, two of the family and one of the servants were quite ill with the same fever, from which they recovered. It is now impossible to say, with confidence, that these persons had been below the hill in the infected region, but there is every reason to believe that they had been, as it was usual for them to go in that direction, and at the time they apprehended no danger. I do not remember that there were any other cases of fever in the vicinity of our house on the heights.

“I am, with respect,

“Yours, &c.

“THOMAS L. WELLS.

“D. E. WHEELER, Esq. Congress Hall, Albany.”

Vessels arriving at the quarantine from interdicted ports with a healthy crew, not allowed to come to New York, have usually been permitted to come to the wharves at Brooklyn, after two days quarantine, and immediately discharge their cargoes, and the vessel remain at the wharves, or reload for any outward port.

A transient person from the West Indies, died in New-Haven, Connecticut, in the year 1743, of the yellow fever, and soon thereafter the wife of the Innkeeper, where he lodged, also took the disease and died.

In June, 1794, the disease appeared again at New-Haven, and the selectmen on inquiring, ascertained that a vessel had arrived from Martinico, which was infected with the yellow fever; that she lay at Long-wharf, and in the immediate vicinity where the fever first manifested itself, and that she had brought home a chest of clothes which belonged to a sailor who died of the yellow fever at Martinico; and that it was opened in the presence of Capt. Truman, Mr. Austin, Henry Hubbard and Polly Gorham, and in a short time, the three last died with the yellow fever; and prior to the arrival of this vessel, no unusual sickness had been discovered. Capt. John Smith died at New-Haven, on the 20th of August, 1795, with the yellow fever which he caught in New-York, and from him, one of his negro servants took the disease. Cases of yellow fever again occurred at New-Haven, in 1805.

Four cases of yellow fever occurred at Middletown, Connecticut, in the year 1820, and the circumstances attending them were so singular that Dr. Beck made a special report of them. The persons seized, were engaged in working in a cotton factory, about four miles from the centre of the city, and at a distance of about half a mile from the river. Upon inquiring where Wild, one of them had been, immediately previous to his attack, it was ascertained that two days before he was taken sick, he had been on board a vessel from the West Indies, the *Defiance* of Middletown, then lying at a wharf about two miles below the factory. While in the West Indies, one of her men was taken sick with the yellow fever. The other individuals who were taken sick in the factory, went to see Wild while he was sick, and they also slept in an adjoining room, with only a wooden partition between them.

The disease has also visited New-London and Norwich, Connecticut, and East-Hadam, in and subsequent to 1795, and in every case traced to some vessel, as is asserted with confidence.

The yellow fever visited Providence twice, prior to the year 1805 ; but history gives only the fact of its existence, without in any manner accounting for its appearance.

In 1805, it made its appearance early in the summer, before the heat had become very oppressive, and at a time when the town was unusually cleanly ; and the district in which it first appeared was remarkably clean and free from filth. The houses it visited were not compact, but their occupants were cleanly and comfortable, while the wharves and stores had nothing offensive about them, and the docks free from any effluvia which could be noisome to the senses. The disease was confined to streets adjacent to the water, and within thirty-five or forty yards from the head of the wharves.

All vessels this season, prior to the commencement of the disease, from any and all the West India islands, whether sickly or not, were allowed to come immediately to the wharves, without performing Quarantine.

A short time before the fever broke out, three vessels, from different ports in the West Indies, arrived and unloaded at the wharves in the district subsequently infected. One arrived on the 4th of July, and two others upon the 12th. On the 19th, one person was attacked,

and prior to the 25th, nineteen cases occurred, and on this day the board of health ordered the infected district to be evacuated and the shipping removed, and immediately the fever ceased. The persons who were attacked, not only lived in the vicinity of the vessels while at the wharf, but had been aboard of some one of them. The first vessel, the Planter, which arrived, had lost two of her crew by yellow fever, at Santa Cruz. The second vessel, the Hiram, arrived on the 12th from Antigua, and one of the owners suspected that the air of the vessel was not good, from the countenance of the crew, and threw a quantity of sailors' clothes overboard. The third vessel, the Juno, arrived on the same day from Havana, and had one or two people sick on her passage home.

The yellow fever has also visited Boston, but it has never been so destructive of human life, as in New-York, Philadelphia, and Baltimore, and if the views taken by some of the medical profession are correct, the reason is, that the domestic sources of disease are less numerous. In the year 1798, this disease first visited the city, if we exclude that mentioned as occurring before the settlement of the Plymouth Colony. It was very confined in its location, and the number of its subjects were small. The portions of the then town of Boston visited were low and marshy, and on its eastern and southern borders. In 1802 it again made its appearance, though in much narrower limits than before, and in 1819 the town was again interrupted in its general prosperity by this unwelcome visitor, but its ravages, like those of previous years, were confined to particular places, and those low, and exposed to the violent rays of the eastern and southern sun of summer.

The causes of these attacks, if we seek them in importation, seem certainly obscure, and perhaps do not exist; and yet the believer in importation insists that the yellow fever was not there unless it was imported directly, or carried there from New-York, or some place in the United States, where the fever was raging, or by the clothes of some one who had died of the disease in some other place. During the prevalence of the disease, however, in 1819, the ship Ten Brothers arrived at the port of Boston, after an absence of a year on a voyage to the coast of Africa. The captain and a boy died aboard the ship, of a fever, at Princes Island, in February or March. She stopped at Martinico, on her way home, and discharged the greater portion of her cargo, consisting of corn, and returned to Boston with but little

cargo. She arrived at Quarantine ground, Boston bay, on the 29th day of July of that year. The ship leaked before her arrival, and while at quarantine, was washed and fumigated in the cabin between decks, and everything on board cleansed as far as possible, although her sparse cargo was not removed from the ship. The ship was admitted to be very foul and offensive to the senses, her limbers filled with putrid corn and coffee; and many of the gunny bags and the coffee filled with insects. In this manner the ship went to the wharves of the town on the first of August, in a warm rainy day, and various articles were taken from her and sent to various parts of the city. On the day and day after the ship arrived, all the crew were taken sick, and all died but two. On breaking bulk and examining the bilge water in the lower hold, it was found to be covered with a white scum, and exceedingly offensive. After this arrival many persons went on board, and some of them were taken sick, and in most cases the disease proved fatal. But the disease which made its appearance prior to the arrival of this ship, and that subsequent, seemed to keep in their own channels, and not mingle together.

The first account we have of the yellow fever in Philadelphia, is in the year 1672. In the year 1699 it again appeared, and was malignant, and believed to have been introduced from the West Indies. Dr. Lind gives an account of a trunk being brought from Barbadoes to Philadelphia, in 1741, containing the clothing of a young man who died of the yellow fever at that Island; and he says that all the persons present when the trunk was opened contracted the disease, which was afterwards propagated to other persons in the city.

In 1793 the ship *Hankey*, which sailed from England for the coast of Africa in 1792, touched at the West India Islands, is charged with bringing the fever again to Philadelphia; for the fever broke out aboard of her, and on her arrival among the Europeans and natives in the West Indies. The disease was exceedingly malignant in the Islands, and fatal in Philadelphia, after her arrival there. Some doubts, however, remain as to its importation, for the account given of it by Dr. Chisholm has, by some, been questioned.

In 1798 the yellow fever again visited Philadelphia, and much evidence exists to show that it was brought there by the *Deborah*, an infected vessel from Jeremie, St. Domingo. She lost seven persons on her passage, with fever, and five of her crew while in the port of

Jeremie. She had been employed as a transport ship for the British troops at St. Domingo previously to her taking a cargo. While this vessel lay at Jeremie, a mortal disease was prevalent, which was called *MALAD DE SIAM*. When the Deborah arrived, she had on board about 100 persons, including passengers. The size and martial appearance of the Deborah led a number of young men and boys to visit her, and immediately thereafter the yellow fever broke out in various parts of the city, which was very healthy until this disease developed itself.

The college of physicians of Philadelphia expressed the opinion, in their report to the Legislature of that year, that the yellow fever was derived from imported contagion, and a disease differing essentially from the fevers that occur in this climate, and which originate from domestic causes.

In 1802, Philadelphia again finds the disease within her boundaries, and this is attributed to a packet which arrived from the Cape. Dr. Rush of Philadelphia, however, labored with great zeal, and brought to the task great learning, to prove that the yellow fever was of domestic origin, and that we were to look alone to filthy streets, putrescent matter and other kindred evils, for its true origin in our city. These opinions were nevertheless somewhat modified before he ceased exerting a prodigious personal influence upon the mind of man, for he says, "that it was once produced in Philadelphia *from the effluvia* from a chest of unwashed clothes which belonged to one of our citizens who had died with it in Barbadoes." This influence, says Dr. Monette, has doubtless been the destruction of thousands, and had it not been so great in the medical community of the United States, our northern sea ports would not have been so long subject to the pestilential visitations of yellow fever. The southern ports, still acknowledging a vassalage to his authority, and to his arbitrary dictation, through his disciples, to this day immolate hundreds and thousand of victims annually upon the altar of a blind credulity.

Dr. Mitchell ascribes the yellow fever which appeared in Virginia in 1741 and 1747, to specific contagion, and mentions that it had been twice imported into Virginia by His Majesty's ships of war; and the yellow fever which prevailed at different periods at Charleston, South Carolina—namely, 1732, 1739, 1745, and 1748, Dr. Leamy says, was always traced to some infected person recently from the West Indies.

The committee would not feel that they had performed their duty if they closed their labor with this imperfect glance at the yellow fever, its origin and consequences, for a disease which often prevails in the city, and chiefly foreign in its origin, has been, and is daily overlooked by the citizen and the medical man. It may be difficult to give a satisfactory reason for the existence of this indifference, still it nevertheless exists, and few, very few, are aware of the number of its victims. The small pox is a greater foe to human life in our latitude than yellow fever, and its march, though noiseless and unheeded, is more certain of its victim, and more difficult, because noiseless, to guard against, except by vaccination.

This disease, although generally considered only contagious, is nevertheless evidently epidemic, for its history shows its gyrations ; and sometimes it is like the blast of the sirocco, perfectly desolating, and again gentle in its effects, and only taking now and then one, but all it touches it marks for life, and though continually spreading, it is never spent. Medical records tell us of its movements and theorise upon its laws, but facts not unfrequently baffle all theory and leave us only to know that it is *also* a pestilence that walketh in darkness and wasteth at noonday. It sometimes lies dormant, or at least assumes no epidemical character for months and years, and then again it falls like the dews of heaven, not however to fertilize the earth, but to destroy all who may come within its deadly influence.

It was introduced into Mexico, according to Humbolt, in 1520, by a negro, the slave of Narvaez, and from this period it has made its ravages in this vast region, at regular intervals of 17 or 18 years. The Chinese Empire, has known its ills for centuries ; and indeed there can scarcely now, be found a place upon the earth, inhabited by man, where its steps cannot be traced. Vaccination has done much to prevent its triumphal march, still it is one of humanities scourges, and one to be guarded against. In the year 1838, England alone, lost by this awful disease, 16,268 persons ; in 1839, 9,131 ; in 1840, 10,434 ; in 1841, 6,368.

In London, the charnel house receives weekly of its victims, from ten to one hundred. And the table annexed to this report,* shows the annual deaths in the city by this disease since 1805.

* Table No. 3.

In the year 1830, says the distinguished John Davy, M. D. Inspector-General of the army hospitals, the smallpox was introduced into the island Malta, by H. M. S. Asia, which came into the harbor of Malta on the 18th of February of that year, from Napoli de Romania. The disease spread with a gradually increasing rapidity, until the month of July, in which month *alone*, 1,464 persons were attacked, and in August, 1,325 additional cases occurred. It then generally subsided until August, the following year, when it ceased. From its commencement in March, 1830, to its cessation in August, 1831, 8,067 persons were attacked in Malta alone; and from its first appearance to its cessation in the adjoining Island Goza, between April, 1830, and May, 1831, 2,284 persons were attacked; of whom 1,172 died in Malta and 351 in Goza, and yet the whole population of Malta at that time did not exceed 106,000.

The small-pox epidemic, during the year 1840, attacked in France, 14,470 persons, of whom 1,668 died.

The smallpox is doubtless always in the city, but professional medical men who have given it the most study, attribute it principally to the arrival among us of those whose habits of life are necessarily more congenial to its growth than our own. It may be and doubtless is, impossible to prevent this calamity, for the immigrant may leave his home perfectly well, and on his way to the sea board come in contact with the smallpox. Unconscious of his diseased condition, he leaves his native land with three or four hundred other persons in one vessel, and a great portion of the time during the voyage that mass of human beings is confined in the "between decks" of a ship, in which, with all the modern improvements in ship building, the air must of necessity be confined and vitiated. Here it develops itself—finds its own congenial home, and subjects peculiarly fitted for its gnawing appetite. This supposition is often reality, and truth may be even more strange; for if the voyage is a short one, the disease may be communicated to a large portion of the passengers, and the person communicating as well as the persons receiving the poison may alike be unconscious of their condition until after they shall have arrived in the city, or perhaps not until they are wending their way on board our river or canal boats to the west, leaving as they pass no visible mark, yet a contagion to spring into life, and a disease the most filthy and destructive, which suffers no frost to blight it, like the yellow fever, but traverses alike the arid plain and the cloud-capt

mountain, and seeks the lone hut as well as the crowded city. This calls loudly for relief, for while we claim to be an asylum for the oppressed, good regard to ourselves, kindness to those seeking a refuge, direct that the evil should be corrected if not destroyed.

The greatest preventative to the general prevalence of the small-pox, is vaccination, and in the examination of certain institutions and asylums, in our own country, says Dr. James Stewart, I learned that here the greatest care is bestowed on the details of vaccination, and it is here that we look for the fullest benefits up to the age of 14 years, the period at which they are usually discharged. The aggregate number of children received into the different orphan asylums of Philadelphia, since their establishment in 1841, is 1,009, and among the whole, there has been but one death from smallpox out of sixty-five cases of the disease.

The alms house and orphan asylums in Baltimore, have received 3,500 children, and none have died by the smallpox.

In the city of New-York, the total number received into all the orphan asylums, is 2,384; and although the smallpox has appeared in two or three of them, it was in a greatly modified form, and no deaths have occurred from it. The house of refuge exhibits an aggregate number of 2,657 of children received in sixteen years, and no death from smallpox; which presents this great fact, that of the aggregate number of children, up to November, 1813, received into these various institutions, amounting to upwards of 9,550, from the poorest and most desolate, of all ages under fourteen years, but one single death has occurred from smallpox; and to this may be added, that the physician at Long Island Farms, (a department of the New-York alms-house) states that it appears from the statistics of that establishment, that 5,856 children were received from the first of November, 1834, to the first of May, 1843; and in that period, only eight deaths from varioloid among those in whom it was ascertained that vaccination had been practised. In all these institutions vaccination is insisted upon, either before or on entering them, unless the applicant has had the smallpox.

It is thus obvious, from a survey of the preceding facts, says Dr. Samuel Forry, in an able "dissertation on the protective powers of vaccination" (from which we have taken those which we deemed ger-

main to our inquiry), "that the benefits of vaccination, instead of being manifested in a *universal exemption* of the vaccinated from an attack of smallpox, are shown in an immense saving of human *life, and in the disarming of this loathsome scourge of its terrors.*"

It will be perceived, on examining the table above alluded to,* that in the year just closed (1845), 413 deaths have occurred in the city of New-York, from this loathsome disease.

This subject attracted the notice of the commissioners appointed to supervise the receipts and expenditures of the charitable institutions of the First Senate district, in 1843, and in their report to the Senate that year, they say: "Although it was originally intended that our quarantine laws should have reference more particularly to the prevention of yellow fever from being imported into the city, it is, however, very obvious that this salutary operation of these laws is much more apparent in the protection they afford the city or State against the introduction of that most loathsome disease, the smallpox. It appears from the statement of the health officer, which is appended to this report, that two hundred and ninety-seven cases of smallpox were admitted into the marine hospital during the last three years. The amount of disease which these cases would have communicated in every part of the city and country, had they been allowed to mingle with our population, can scarcely be calculated. It is indeed highly probable, that a great proportion of the cases which occur in this city are originally brought here by immigrants from other countries. In reference therefore simply to the prevention of the introduction of smallpox among our citizens, the quarantine laws are of great public importance."†

This benefit, so deservingly spoken of, is rather incidental, and not the direct effect of the present quarantine law; for the reason, when the smallpox makes its greatest devastation, vessels are not subject to quarantine. The law should embrace in its benign effects all seasons, that this disease may, if possible, be stayed in its periodical marches among us, and the benefits of vaccination be embraced as far as may be practicable in this portion of sanitary regulation. The necessity and usefulness of this change in the law will be more apparent on examining the annexed table,‡ which gives the number of patients ad-

* Table Fo. 3.

† Senate Documents, 1843, No. 42.

‡ Table No. 6.

mitted into the Marine Hospital since 1799, the various diseases, and the number of deaths.

And yet scarcely any precautionary measures have been taken to prevent its importation, and "at present," says Dr. Vaché, now the able resident physician, "vessels having on board this disease, are not liable to a visit from the health officer in winter, and are constantly importing the NUCLEUS from which it spreads, not only rendering futile the efforts of the board of health to eradicate it, but destroying, as the monthly bills of mortality exhibit, a large number of persons in the interim.

There is still another disease, which medical men conceive foreign in its origin and epidemic in its character, which quarantine laws are supposed to be framed to guard against, and if possible prevent, visiting our citizens. The success of quarantine laws, however, in preventing the onward march of the cholera, is certainly questionable, for this disease has, during the present century, marched into almost every commercial town on the face of the earth, and where it has gone it has over-matched man, and taught him the oft repeated lesson, that it is not in man to direct his steps or to put landmarks to his life. The progress of this terrific disease is carried upon the wings of the wind, and before precautionary measures can be perfected, before the signal of its approach is heard, the voice of the sufferer gives note that it is doing its deadly work. The cholera was a strange disease on this continent prior to the spring of 1832, when it was supposed to be brought to Quebec, Lower Canada, and from that to Montreal, and from thence across the St. Lawrence, down Lake Champlain, our Northern canal and the Hudson river, to the city of New-York. From this source no danger was apprehended and no guards interposed, and had there been, the history of the disease shows that its own fatal miasmata would probably have been wafted upon the wind, and all who breathed the air of heaven been in danger of breathing also the germs of death. In Asia the cholera has been epidemic from the earliest history of man, but generally less destructive to human life than in modern times, but its first appearance in Europe was in the latter part of the fifteenth century, and there it has appeared at different, generally distant intervals, down to the time it visited this continent. It doubtless always exists in India, perhaps always in China, and the commercial relations of those countries with Europe and America will always make them liable to its importation, although,

to use the language of the King of England to Parliament, in 1831, "whether it is indigenous or has been imported from abroad, is a question involved in much uncertainty ; but its progress has neither been so extensive nor so fatal as on the continent." If it is indigenous in England, and quarantine is effective in preventing its ravages there, certainly the danger of our suffering from it is increased, and the greater the necessity of arming ourselves by law against its influence. "The quarantines, however," says the eminent Scoulteten, "to which persons and things from infected places are subjected, ought also to be modified. In studying the progress of the disease, we have noticed that it is rapidly and almost instantly developed, and that the precursory signs of it are very slight and almost imperceptible ; thus the miasmata act instantly or shortly after they have entered ; the cholera has never been known to attack a person 10, 20 or 30 days after quitting an infected place. Is it not in fact terrible, that because one comes from a country the health of which is suspected, that he must be kept in a lazaretto, a prison always more or less unhealthy, for 10, 20, 30, 40, or 50 days, or even longer, provided the caprice of the inspector requires it ? Such a punishment is enough to make one sick. This rigor is useless and vexatious ; justice and reason require it to be abolished.

"The longest quarantines in coming from a place infected with cholera should not exceed ten days, or not more than two or three days at most, in coming from a country adjacent to that infected ; and NONE should be enforced, if the person has travelled two or three days without any marked alteration in his health. Quarantine upon vessels should not be entirely abolished : By obliging the crew to remain on board, we expose their health, since the vessels are often the foci of infection.

"Although merchandise and other inert substances do not seem capable of propagating the disease, yet careful prudence requires that we should not dispense entirely with purifying porous substances ; furs, woollens, silks, cottons, &c. by exposing them to brisk and dry air. Fumigations of chlorine also would be useful for substances which would not be injured by it ; but all metals, polished bodies and fluids, should pass uninterruptedly. The interests of commerce and of the nation require, that *every precaution* not indispensable should be abolished ; *for to fetter industry is to ruin the artisan, and perhaps it is as well to die by the plague as by famine.*"

Others, however, perhaps equally learned, conceive that the cholera has not as yet manifested a certain period of latent existence, during which the disease has the power of transmission, and beyond which it is extinguished, and consequently the inference is drawn that quarantines of any kind or for any time are comparatively useless; and, says the report read at the Royal Academy of Medicine, at Paris, in 1831, "If commercial nations were too much restricted by quarantines, if the people are crowded together by sanitary cordons; if the sick are collected in lazarettos, we hasten the attack, we increase the misery, we multiply the causes of the developement of the disease: new foci of miasmata of cholera are created, and these measures employed in all the good faith of ignorance, to preserve the people from the disease, would tend directly on the contrary to generate, to propagate, and to aggravate it."*

That this disease has been brought here, every intelligent man who has examined the subject is ready to admit; and that it came baffling all the skill and wisdom of man; and that after it came, it manifested its requirements for subsistence, developement and propagation. These are, a dense population, excessive moisture and heat of atmosphere, a want of cleanliness, a deficiency of ventilation, misery or excess: these are not its necessary aliments, but they contribute largely to its awful power. The first case known in the city terminated fatally on the 29th day of June, 1832, although many medical men doubted its existence until the 2d of July, and from that day to the first of September, the city was overwhelmed by sickness and death beyond a parallel in her history. In the short period of one hundred days THREE THOUSAND FIVE HUNDRED AND THIRTEEN PERSONS died by this disease. One thousand seven hundred and ninety-seven in July, one thousand two hundred and thirty-two in August, four hundred and fifty-one in September, and sixty-three in October. This disease appeared again in 1834, though the manner of its approach has not been definitely ascertained; yet in its career it took from the inhabitants of the city *nine hundred and seventy-one persons*.

The mere statement that the yellow fever, the smallpox, and the cholera have visited the city, suddenly taking from the earth many of its inhabitants, will be imperfect, unless it is accompanied with a description of the island and its internal sources of disease, for without

* Translation by Dr. Doane.

these the mind may return from the history unsatisfied, and suspect an internal cause which was not presented.

The latitude of the city is $40^{\circ} 42' 45''$ north ; longitude $74^{\circ} 1' 8''$ west from Greenwich, and was settled by the Dutch prior to 1621. The island of New York is about 15 miles long, and varies in width from half a mile to two and one-third miles, and contains about 13,920 acres of land, is very uneven in its natural appearance, and its foundation is solid primitive rock. It has some high hills and low grounds, and its general altitude in the centre of the island is from forty to fifty feet. Its west side is washed by the North River, and its east and northerly side by the East and the Harlaem rivers, each salt water, and the tides create a strong and rapid current. Its shores are generally bold and rocky, the soil generally good and fertile, free from clay, and its southern extremity abounding in coarse clear sand, and its little rivulets are shallow and rapid. The southern extremity of the island is bounded by the confluence of the Hudson and the East rivers, where they expand into a beautiful bay of about seven miles in diameter, bounded by sloping hills, with deep water, and no marshy ground except upon the New-Jersey shore. Few, if any, places on this continent are more beautifully located for a city, or possess greater natural advantages for health.

East of Broadway, and south of the present City Hall, was formerly a swamp, called Beekman's swamp, of about two acres of land ; and a little north of the same point was a pond of fresh water, supplied by everliving springs, which had its outlet by a beautiful meandering brook to the North River, and from this pond a meadow extended to the East River at a point now known as the foot of Roosevelt-street.

In 1798 most of the inhabitants of the island resided east of Broadway and south of Beekman-street, and in 1822 about one-half of the inhabitants resided south of the present City Hall. The whole island south of the City Hall contains not far from three hundred and fifty acres of land, including that made out of the water, the streets and places for promenade, churches and grave yards. The city was illy supplied with water after the authorities had violated the trust a bountiful God had given them, by filling up "FRESH POND," and obliging the citizens to resort to the rains of Heaven and water drawn from the bowels of the earth through ground daily becoming saturated by cispools,

filthy surface water, and the thousand nuisances incident to a thickly settled town, which has a rocky foundation, nearly flat, although surrounded by salt water.

Upon this three hundred and fifty acres of land is the Battery, at the southern extremity of the city, containing about eleven acres, the Bowling Green at the southern extremity of Broadway, and the grounds at Columbia college, and the remainder is used for ordinary building purposes, yards, streets, churches, and grave yards. On this small point of land, prior to 1822, there were TWENTY-TWO places for the burial of the dead, and some of them had been used from the first settlement of the island. They were the principal receptacles provided for all classes, and in these twenty-two places of interment most of those who had died in this thickly settled spot prior to 1822, were laid, but they did not find it a place "where the wicked cease from troubling and the weary are at rest."

The Trinity church grave-yard is bounded easterly by Broadway, southerly by Rector-street, westerly by Trinity-Place, and northerly by occupied ground south of Thames-street, and is situated upon high ground, and contains two and a half acres of land, and is walled up on three sides, and the westerly wall is more than three hundred feet in length, and from ten to twelve feet high on the outside, and it is filled up to the top on the inside. This church was built prior to 1698, and the grave-yard attached to it received the dead until some time during the yellow fever of 1822. Prior to 1702, the public grave-yard was situate north of that of Trinity church and adjoining it; and in that year, "the rector, wardens, and vestrymen of Trinity church" presented a petition to the common council of the city, praying that the burial place of the city be granted to the corporation of Trinity church forever; and the records of the common council of February 16th, 1702, have this paragraph:

"This court having considered the said petition, doe Order that the said Burial place be granted to the Rector, Church Wardens and Vestrymen of Trinity Church, in New-York, forever, to be appropriated for the public Church yard, and burial place of the city, forever, they and their successors always keeping the same in good fence, well repaired, and taking only for breaking of the ground for each person from twelve years of age and upwards, three shillings, and for each child under twelve years of age, one shilling and six-

pence, and no other or greater duty whatsoever, for breaking the said ground, and that Mayor execute a grant for the same accordingly."

The number of persons buried in this yard down to 1822, cannot be computed, but it is almost beyond belief. In the remarkable cold winter of 1780 and 1781, the city was in the possession of the British troops, and the very great number of British soldiers and other persons who died in that winter, were buried here and interred but a small distance below the surface of the earth. And in consequence of it the burying ground became so offensive the following season, that it was necessary to cover it over with earth, and the commandant ordered the soldiers to cover the whole ground with a stratum of earth, two or three feet thick. In 1822 it was also very offensive to passers by in Broadway, Rector and Lumber streets, even before the yellow fever broke out. Dr. Rosa says, in a letter to Mr. Akerley, that on the night of the 22nd of September, (1822,) I covered Trinity Church yard with fifty-two casks of quick-lime, and the stench was so offensive as to cause several of my laborers to *cascade* (vomit) freely, although the process of slaking the lime was going on rapidly. *The smell was very great in every part of the yard, but the most offensive part was in the rear and where it adjoins Lumber and Rector streets.* This statement is confirmed by a number of individuals who resided in Broadway or Wall-street opposite the church yard. The vaults of the North Dutch church, in William street, corner of Fulton, were also very offensive. Mr. Akerley also says, I am since informed by the same authority, that the vaults of the Presbyterian church in Wall street, near Trinity church, emitted offensive smells, as well as those of the Middle Dutch church, corner of Liberty and Nassau streets, and the vaults of some other churches where there are not so many buried. St. Paul's church yard emitted unpleasant effluvia, but not so bad or concentrated as those of the other burying grounds.

The process of decomposition, says an eminent physician, is not complete until three years after the body is buried at the depth of four feet; or four years when interred six feet. In a vault, a body may decay in a year.

Furcroy, who was appointed by the public authorities of Paris director for the removal of the human remains in the Cemetière des Innocents, in Paris, commenced his work in the winter of 1785, and

a number of the grave diggers employed were killed on the spot by the putrefactional exhalations emitted from the tombs. The work was suspended in the summer, and complaints of the grave yard were continued until the human remains were all removed, and the Cimetière des Innocents has been converted into one of the most beautiful squares and one of the finest markets of Paris. Since the removal of these burying grounds, the average mortality of Paris has diminished and the air is more salubrious.*

The bad influence of human remains upon a healthy atmosphere, has found adherents ever since the commencement of medical science, and immense loss of life has been attributed to this influence, at various periods, even since the awful pestilence which carried off a great body of the Carthaginian army, while laying siege to one of the cities of Sicily, and which at the time was attributed to the miasma that arose from the destruction of the tombs around the city.

The influence of the grave yards in New-York was pronounced bad, on an examination by a committee of the board of health, and Dr. Edward Miller, in 1822, wrote a very able report on the subject, in which he says, "interments of dead bodies within the city *ought to be prohibited*. A vast mass of decaying animal matter is now deposited in many of the most populous parts of the city. It is impossible that such a quantity of these animal remains, even if placed at the greatest depth of interment commonly practised, should continue to be inoffensive and safe. It is difficult, if not impracticable, to determine to what distance around, the matter, extricated during the process of putrefaction, may spread; and by pervading the ground, tainting the waters, and perhaps emitting noxious exhalations into the atmosphere, it may do great mischief." The influence of this opinion was so great that a law was passed which in its effect has prevented the general use of any vault or grave yard for the interment of the dead south of the City Hall, since 1822.

The board of health, on the 12th day of August, 1822, resolved, "That a committee be appointed by this board of health to inquire into the expediency of regulating or preventing the interment of the dead in Trinity churchyard during the continuance of the present epidemic"; and the late Richard Riker, (then recorder,) was chairman of

* See Statistical reports of Paris, in the Bulletin de la Soc. Med. for January, 1822, by L. R. Villermene, and Annales de Chimie, v. 5 p. 154-185, and vol. 8 p. 17-18.

that committee. In the discharge of their duty, they ascertained *that one hundred and forty-seven* persons had been buried in that yard from May 1, 1822, to August 9th, of the same year; and in their report they say: "Your committee have also ascertained from different persons, on whom they think implicit reliance may be placed, that the yard of that church is at times offensive to persons in its vicinity, and that in the evening especially, the exhalations are such as perhaps are dangerous to the health of the citizens in its immediate neighborhood," and recommended the passage of the following resolution, which passed the board: "That no grave be permitted to be opened or dug in Trinity churchyard, until the further order of the board of health, under the penalty of one hundred dollars:" that this resolution, together with the law the Legislature had previously enacted, and the ordinance subsequently passed by the corporation of the city, has prevented the general use of any vault or graveyard for interment from that time (August, 1822,) to the present.

The position of New-York, in relation to other places, is remarkably favorable to the residence of a large number of persons upon the island, and the accommodation of others living in its vicinity, who may seek New-York as a place of business, and a more quiet and retired one for a residence.

The city of Brooklyn is immediately opposite New-York on the east, and separated from it only by the East river, and distant at the nearest point about six hundred and thirty yards. Its proximity to New-York, and the great facilities it now possesses for crossing the river, gives it advantages for growth no other city can obtain. The number of its ferries extend to the citizens great conveniences for reaching any part of the city, and when it is known that the boats during summer pass the river in less than five minutes, and reach and depart from each side, at the Fulton and South ferries, in about the same time, from four o'clock in the morning to ten or eleven o'clock in the evening, it will be found that the distance can be about as easily passed as though it were solid earth, and at the same time the freshness of the breeze and the coolness of the water adds greatly to the attractions of a Long-Island residence. The heights of Brooklyn are about ninety feet above tide water, and immediately opposite Wall-street, New-York, and have a commanding view of the whole city and bay.

The New-Jersey shore is separated from New-York by the North River, and distant from it at the nearest point about seventeen hundred and ninety-eight yards, between which there is a constant intercourse from the great facilities afforded by steam ferry boats. In the upper bay there are a number of islands, but the principal one is Governor's island, which is distant from New-York about twelve hundred yards. This island and the others are occupied as fortifications. Staten-Island, which comprises Richmond county, and on which the quarantine grounds are situated, is $5\frac{3}{10}$ miles southwest of New-York, and the steamboats of the Richmond Turnpike Company, together, make in the summer season twelve trips from the southerly point of New-York to the quarantine. This landing at Staten-Island, is partly owned by the State, and this wharf is the great avenue for the inhabitants of this beautiful island to take the steamboats for and from New-York, and is bounded northerly by the southerly wall of the quarantine ground. Besides, the boats that ply to this point go to one or two other wharves for passengers, which necessarily cause all the people from the south side of the island, who go to or from New-York, to stop at this wharf. The number of persons who pass on this ferry route during the summer is not easily ascertained, but the number is very large, particularly since many of the citizens of New-York have found the island a delightful summer residence for themselves and families, or a place to find a cool sea breeze to ward off the oppressiveness of a crowded city. Upon these boats you will often find the passenger seeking the city, whose home upon the deep lies quietly at anchor performing her quarantine, and the hardy sailor exchanging the deck of the ship which has brought him in safety from a sickly clime, for the little craft which moves like a thing of life, to find his friends, while the white sail is furled and the vessel resting upon the waters riding out her quarantine, and impatiently waiting for the time when she too may find rest for her burdens in the store-houses of the long desired haven.

In all this moving mass of human beings, no one tells us that pestilence has found its way or contagion marked its victim. This tide ebbs and flows, and will ebb and flow with increased rapidity, and continue to be what it now is, one of the greatest avenues to and from the metropolis.

The distance from Staten-Island to Long-Island at the quarantine ground, as will be perceived by the annexed map of the bay, is only

3,700 yards, and sometimes during the summer months an hundred sail are lying at anchor at quarantine. Should an infected vessel with a large number of persons on board sick with the yellow fever, arrive and be anchored here, the danger to all vessels, whether inward or outward bound, would be very great, as well as those who should pass and repass in the ferry boats. This danger was strikingly manifested in the arrival of the war steamer *L'Eclair*, off the English coast, in September, 1845. Had she been confined within the narrow limits of our present Quarantine ground, and the shipping usually there in the quarantine season been obliged to lay near her, the almost certainty is that disease would have been communicated to persons aboard of them. This single instance is sufficient to urge the granting of power to the health officer to remove any diseased vessel he shall think proper to any anchorage ground inside of Sandy-Hook. The report of this case by the Superintendent-General of Quarantine in England, is full of practical instruction, and no apology can be needed for inserting it.

“To C. C. F. GREVILLE, Esq.

“October 3, 1845.

“SIR—Agreeably to instructions from the Lords of her Majesty's Council, we proceeded to the quarantine station at the Motherbank early on the morning of the 30th, to inquire into the particulars connected with the mortality and the prevalence of a malignant fever on board her Majesty's steamer *L'Eclair*, which arrived on the evening of the 28th ult. from the coast of Africa. Having gone alongside, and interrogated the Commander Harston and Surgeon Bernard, the following is the result of our inquiries,

“*L'Eclair* sailed from Devonport in November last, having a crew of 146 officers and men, for the coast of Africa, on which station she remained until the 23d of July last, up to which period she had lost nine men from the common coast fever. Four days after sailing from Sierra Leone, one man died with fever and black vomit, the first case of the kind which had taken place; this man had been brought on board on the morning of the 23d, having been the three previous days on shore. During her voyage to Gambia and Goree Buena Vista, where she arrived on the 21st of August, eighteen were attacked with the same fever, with black vomit, of which number thirteen died. At Buena Vista, the same disease continued to spread rapidly amongst the crew, when permission having been obtained from the Portuguese

Governor, it was determined to land the crew, sick and well, and purify the vessel. A fort was appropriated for the accommodation of the seamen and sick, and the officers obtained lodgings in the town. Every measure was taken to purify the ship by washing and white-washing, fumigation, &c., all the Kroomen remaining on board with the exception of six employed in attendance upon the sick. The disease, however, continued to prevail amongst the officers and men on shore, thirty-one men having died between the 21st of August and the 13th of September.

“Under these circumstances a consultation was held by three naval surgeons, and upon their report and recommendation it was determined that the steamer and crew should proceed to England. The ship’s company were in consequence re-embarked, and sailed on the 18th of September. Captain Escourt, having been taken ill the day before leaving Buena Vista, died on the 16th. At Buena Vista, the assistant-surgeon Harte, of the *Eclair*, died, when Mr. Maclure, a naval surgeon, passenger in the *Growler*, and Mr. Coffy, assistant-surgeon of the *Growler*, volunteered their services on board; here also seven seamen volunteered from the *Growler*. Dr. Maclure died on the voyage to Madeira, and one of the volunteer seamen was taken ill of the fever and recovered.

“Upon the arrival of the steamer at Madeira, the authorities refused permission to communicate with the shore, as had been previously done by the French at Goree; but at this island Mr. Bernard, a naval surgeon, volunteered his services, and was received on board, with two seamen. From the day of her sailing from Madeira, the 21st of September, up to this date, the 30th, seven deaths have taken place from the fever, and eight new cases have occurred, viz :

“Deaths.				Fresh cases.			
2 on the 21st of September,				1 on the 22d of September,			
1	“	25th	“	1	“	23d	“
1	“	26th	“	2	“	25th	“
1	“	28th	“	3	“	26th	“
1	“	29th	“	1	“	29th	“
1	“	30th	“				
7							
=							

“The fever still prevailing on board, the first measure deemed necessary was that the ship should be kept in strict quarantine.

“2. That the healthy should be separated from the sick. The steamer was therefore ordered to the Foul Bill quarantine station at Stangate creek ; and an arrangement having been made with the Lords of the Admiralty, by which two ships in ordinary, with a proper supply of bedding, &c., were ordered to be placed at the disposal of the superintendent of quarantine at Stangate, with the view of personally superintending the arrangements, we proceeded to Stangate creek, and having ascertained the number of officers and men who had hitherto escaped an attack of the fever, viz. forty-one, they were directed to be immediately transferred to the Revenge, having first undergone the operation of ablution, and afterwards supplied with clean clothing and bedding. All those who had recovered from the fever, together with such number of convalescents as were in a state to be moved, were directed to be transferred to the Benbow, leaving only on board the steamer the sick, and such number of officers and men as the commander might think necessary ; the Kroomen also to remain on board, (not one of whom had been attacked with fever,) excepting such number as might be thought necessary to assist on board the Revenge or Benbow.

“Since the 30th ult. three seamen have died, but we are happy to state that no fresh case of fever has occurred since the 29th ult., and that at present there are only two men confined to bed with the fever, and eleven convalescents, under the care of the two medical officers, a surgeon and assistant surgeon, who have been on board ever since the Eclair sailed for Madeira ; and we have a confident hope, from the present state of the crew and the measures adopted, that the progress of the disease is arrested.

“We have the honor to be, sir, your obedient servants,

“WM. PYM, *Superintendent General of Quarantine.*

“JAMES M. ARNOTT.

“The Eclair is moored right in the middle of the Medway, off Stangate creek, while the Revenge and Benbow are at their usual moorings, close on the opposite shore. From the direction the wind has been in since her arrival, they have been able as yet to keep well to the windward of her. She has the yellow flag, with a black ball in the centre, flying, and her rigging is crowded with hammocks and

bedding. It is no wonder, then, that they should be anxious to steer clear of her. It is stated that Sir William Pym, the Superintendent General of the quarantine service, has been down, and with Captain Lock, the captain superintendent of the Stangate Creek station, has been personally superintending the arrangements.

"The medical officer doing duty on board the *Eclair* has also been attacked with fever. Dr. W. Rogers, assistant-surgeon of the Ocean, in pursuance of orders from the admiralty, proceeded to take medical charge on Sunday last. The sick occupy one hulk, the healthy whites and convalescents another.

"The last marine artilleryman, who took the fever on board the *Eclair*, died on Tuesday, and was buried in the quarantine ground."

This rapid sketch of the yellow fever, smallpox and cholera, will doubtless be found unsatisfactory, and if the inquiry is pursued, great difficulties will be encountered, for truth can scarcely be said to be the presiding genius.

Disease is always difficult to be understood, and when it takes to itself an epidemic character, and seizes upon man in all the forms of society, the poor and desolate as well as the comfortable and happy, and under circumstances which apply to man generally, the difficulty is immeasurably increased, and its sources not distinctly apprehended in any combined causes, or even in man's prolific imagination.

This general thought will be found true, also, from a perusal of the answers of medical gentlemen, to the circular and interrogatories addressed to them by the committee, which are attached to this report.*

Conclusions, however, may safely be drawn from contradictory testimony and varieties of opinion, which may be relied upon as the basis of action, or the foundation for legal enactments. And perhaps no instance can be cited more forcibly true, than the one under consideration. To reconcile historical facts, and weigh learned opinions in a balance and find the truth sought for, would here be a task herculean indeed. The testimony derived from those who have obtained their information from practical commercial life, is not so embarrassing; and yet here even, will be found difficulties hard to be overcome, if a perfect rule is insisted upon.

* See Circular and Interrogatories.

Sufficient appears, however, from the evidence before us, which is uncontradicted, to convince any one, however tenacious he may be of a particular theory in regard to the yellow fever, that it has actually existed in New-York, Philadelphia, Boston, and other places in the same or nearly the same latitude, and that it is in some way connected with commerce (not perhaps exclusively); and that the disease has proved epidemic in its character, or possessing power of reproducing in some manner its kind, if it can find subjects to operate upon. It must also be evident to the same individual that its best element for growth is a warm and moist atmosphere, a vitiated air, illy ventilated apartments, bad food, unwashed person, a diseased fancy, a crowded city, or thickly settled population near the water, marshy or new made land, uncleanly shipping, damaged or infected cargoes, sick persons on shipboard, from a sickly port, or one within the tropics.

A rural life frees man from all these ills, certainly most of them, but the moment he enters upon a commercial existence, that moment he is subject to these evils and thousands of others the history of commerce spreads before him. Society has become so artificial that it is useless to question the wisdom of its varied requirements, and it is worse than folly to cease legislating against those which are positively evil.

Humanity has hushed one of its horrors, and though it now and then utters its groans, it is comparatively harmless. The history of the slave trade runs almost in parallel lines with the history of the yellow fever, and had not the spirit of commerce forgotten in the 14th century the wrongs she was heaping upon man, the horrors of pestilence would not have followed so closely Cabot and Columbus in their glorious efforts to know the length and breadth of our globe. These enterprises and these sources of wealth created new desires, new necessities, and since then the northman has gone to the tropics, and the man of the sunny clime has gone to the region of cold, both unfitted for the different change, though both not equally exposed to the wastings of an awful pestilence. These changes to the individual may be so gradual that he will survive their bad influence upon his constitution, but the very change is against the impulse of reason, and the danger is consequently great. The fruits of the tropics are always delicious; if sound, generally healthy; but to him who comes from the north, with a northern constitution, and with an appe-

tite sharpened by the almost same diet of a ship board, and seizes upon the orange and the pine-apple, they become causes of disease ; and the man with the enervated constitution of the tropics, under similar circumstances, seizes upon the substantial food common in high latitudes, and he too suffers for his imprudence. These individual evils must be subject to individual regulation, but when they are mingled with the influences of a tropical climate, offensive bilge-water, and illy ventilated apartments, and perhaps a foul vessel, with uncleanly ship-mates, their influence must be general, and their effects more or less pestilential.

Science, naval skill, the love of money, and man's indomitable thirst to know all regions and explore all seas, and bring home the world's productions, make it necessary to form laws, if possible, to protect the quiet and unoffending from the pestilence which comes with the adventurer, or starts into life as he approaches. The spirit of commerce, unrestrained, urges freedom from quarantine laws, and talks loudly of her acquisitions, her luxuries, her conveniences, her necessities for man, as more than equivalents for a "fancied imported epidemic," as she terms it ; and yet the Venetians, as early as 1484, found it necessary, after their citizens had visited other climes for gain or pleasure, to interdict the immediate landing of their ships when they came home ; and England, after she became a commercial nation, found it necessary to adopt a systematic quarantine, which she enforced as early as 1720. The Venetian restraints were positive and fixed ; the English more flexible and depending upon circumstances, and governed by careful and minute examination. The laws of other nations and states have interposed barriers to commerce ; some founded in wisdom, others the work of folly and the offspring of ignorance and fear.

The voice of mankind has called for relief, for in many instances quarantine regulations have been not only oppressive to commerce, but pestilential sources of disease and death.

The State of New-York, as early as 1784, enacted quarantine laws, and the examination of them will show that they are scarcely behind those now existing, in their practical operation ; and yet, in 1798, when the city contained only about fifty-eight thousand inhabitants, between two thousand four hundred and two thousand five hundred persons died with the disease the law was passed to prevent. At sub-

sequent periods laws have been enacted, and precautionary measures taken, still, in the years 1805 and 1822, the city found itself in the midst of pestilence, and, in some other years, cases have occurred, but the number has been so small, that the disease could hardly be regarded as epidemic, and they have not been as numerous, if we except the years 1805 and 1822, as at the quarantine grounds.

The situation of the quarantine ground is as free from any domestic cause of yellow fever, as any place in the world. The inference that the disease was imported *there*, is, consequently, inadmissible.

The yellow fever as it has manifested itself in New-York, may have originated from a single, simple cause, and yet its epidemic sources may have been multiform. If it originated from a foreign source, then a vitiated atmosphere in the city may have made it epidemic; and if it was domestic in its origin, then the arrival of a foul vessel, or diseased crew, may have made it pestilential. Should the same causes again occur, they may produce the same result, but the three hundred and fifty acres of land south of the city hall, can never become the charnel house for the city's dead, and the land between low and high tide, will never require to be filled up, or present to an almost vertical sun, a foul dock at low tide, with perhaps one exception; and the inhabitants will find the Croton more healthy and refreshing than the surface water drawn from wells, but partially filtered.

These improvements have become permanent, and can hardly be said to depend upon the contingency of man's supervision. There are evils still existing and sources for feeding these diseases, which depend upon the city authorities or its citizens, which no wise man can approve. The sanitary regulations, or their practical workings, are subject to the severest censure. It is even said "that the port of New-York is now more filthy than any port in the West Indies." No city has greater facilities for cleanliness, and the cause of humanity demands that they should be made practically useful.

The citizens are seeking more comfortable and airy houses in the northerly portions of the island, in Brooklyn, Staten Island, and New-Jersey, and the food for this disease must consequently be lessening, and the danger of its pestilential influence decreasing, and at the same time, the character of the sailor, the comfort and cleanliness of the ship, are lending their aid to relieve commerce from some of its bur-

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dens, and sanitary city regulations should not be wanting in making New-York as healthy a city as can be found on our globe.

Its location, climate, and water, are not surpassed for the general health of the Saxon race, and if our mortality is proportionably greater, or equal to that of any other large city, the cause is doubtless to be found within itself, and should not be charged, by a severe quarantine regulation, upon commerce. If the yellow fever, cholera, or smallpox are imported diseases, they may not be epidemic, except in a vitiated atmosphere, and if the atmosphere of the city is vitiated by bad practical sanitary regulations, then commerce should be relieved, and the city authorities or its citizens held responsible for furnishing disease with food to make it epidemic and destructive. Charging the epidemic yellow fever *solely* to commerce, guilty though she be in part, would be unjust, and laws to regulate her, be very inadequate to preserve the life of our citizens.

The late examinations required by the Parliament of England, and perfected in a most masterly manner, (the testimony filling four or five large folio volumes) in relation to the influence of Smithfield market in London, and the drainage and sewerage of large towns and populous districts, has opened a field for the philosophical enquirer into the demands of animal life, never before surveyed, scarcely apprehended, and the results which this examination may produce, are looked for with great eagerness.

Paris, it is known, has long since provided metropolitan slaughter houses out of the city, and her citizens know nothing of the evil of private slaughter-houses, like those allowed in New-York. Her example, founded in wisdom, produced and sustained by the influence of her learned physicians, (and no nation excels France in this department of learning,) doubtless awakened the English Government to her condition, and forced her to make these examinations.

The authorities of the city of New-York have not, however, been mere observers of what has been done abroad, but have taken, from time to time, incipient measures to establish a general system of sanitary regulations for the city; yet what has been actually done, has been far behind the absolute wants, the absolute demands, of humanity.

A late city inspector, in his annual report to the corporation, says that a portion of the city is "severely affected by nuisances, which

are injurious to the comfort and health of the residents. Among them may be enumerated, the practice of depositing there large quantities of manure and garbage, of almost every description, which is collected from all parts of the city, *poisoning* the atmosphere of the whole neighborhood, and unquestionably producing sickness and disease." The same officer complains of the pernicious exhalations from the Potters-field, though it is three miles and a half north of the city hall, and he regards it as dangerous to the neighboring inhabitants, and informs us that one grave yard, within two miles of the city hall, has received, since 1833, to January 15, 1845, upwards of 29,000 dead bodies of the human race, averaging fifty-nine weekly interments, while the whole area of the ground is less than four acres. Other sources of a vitiated and unhealthy atmosphere, are found in various parts of the city, in slaughter houses, soap factories, the manufacture of loco foco matches, bone manure, soap grease, the melting of tallow, and various other kindred and necessary establishments. They should not, however, be permitted to aid in wasting the energies of man, and depriving him of the due proportionate constituents of air which nature has fitted man to enjoy. These views are also sustained by the present able incumbent of the same office.*

Whatever theory may be adopted in regard to the yellow fever, the statements admitted to be true, and the facts which are uncontroverted, make it manifest that legislation, to be wise on the subject of public health, should provide against foreign diseases and domestic corruptions. Man should not be allowed to destroy himself, or his neighbor, and yet both may be done in a populous city, with no outward violence to law, if he imports disease or pollutes the air by his negligence, or destroys its purity by a noisome trade.

From the examinations the committee have been able to make, they have arrived at the following conclusions.

1. That the yellow fever has been brought to the city of New-York in her shipping, either by the foulness of the vessel, the sickness of persons on board, a damaged cargo, or clothes from those who had died with the yellow fever, or from some of these causes combined.

2. That the yellow fever may be brought to the port of New-York on ship board, when the average temperature at New-York is about

* See communication from C. B. Archer, M.D.

80° Fahrenheit's thermometer, from a sickly port within the tropics, and not be perceived until after her arrival, and perhaps not until after she has broken bulk.

3. That a vessel, from any port where the average temperature is about 80° Fahrenheit's thermometer, not passing into a colder atmosphere, and arriving at New-York in a similar atmosphere, may bring the yellow fever, if the yellow fever is prevailing at the port of her departure, or if she lays along side a vessel infected with yellow fever, or the crew or persons on board are otherwise exposed to it.

4. That the progress of the yellow fever is checked by violent atmospheric commotions, and destroyed by frost.

5. That the yellow fever is not contagious, infectious, or epidemic, in a perfectly pure atmosphere, unless it has been pent up in clothes, or other substances, from persons who have had the disease, and then it will spend itself on the persons first attacked.

6. That the yellow fever will develop itself in from two to twelve days after infection, and may even sooner, if the exposure is to the morbid effluvium of the disease in a concentrated form.

7. That the smallpox, in the city and State of New-York, principally *originates* from foreign sources, and may be lessened by quarantine regulations.

8. That the smallpox, when taken without inoculation, develops itself in from six to twenty-one days, and by inoculation, in from seven to ten days.

9. That the pestilential cholera develops itself in from one to ten days.

10. That passengers arriving in vessels from Europe, not having touched at any port within the tropics, or been exposed to the yellow fever, should, if found in good health, cleanly, and in a cleanly vessel, with an undamaged cargo, be allowed to come immediately to the wharves of the city, with the vessels, after an examination by the Health officer.

11. That quarantine regulations, at the port of New-York, are necessary, but should be made as perfect as human skill can devise, and enforced by medical science, manly energy, and uprightness of

purpose, with as little embarrassment to commerce, as is consistent with a wise caution for the public health.

12. That if the yellow fever can find subjects unacclimated, it has the power on ship board, or on its arrival at the port of New-York, when the temperature ranges not far from 80° Fahrenheit's thermometer, of gathering strength, or of reproducing itself, in an atmosphere vitiated by exhalations from persons confined in illy-ventilated places, by exhalations from animal exuviae, by noisome filth in docks uncovered by water at low tide, by marshy and undrained lands, by soil abounding with dead bodies imperfectly covered with earth, by decaying vegetable or animal matter, by putrid or impure food and water, by an uncleanly habit, by over fatigue and animal exhaustion; and with these causes, perhaps even with either separately, may become a malignant pestilential disease, and its march will be made more easy if the atmosphere is humid.

In the language of McCulloch, however, "quarantine is not a matter in which innovations should be rashly introduced; whenever there is doubt, it is proper to incline to the side of security." No laws formed upon the principle alone that yellow fever originates in, or is brought from certain latitudes or longitudes, or certain ports, places or islands, can insure security; for the disease is not confined within geographical bounds, though it may have only one native home. It traverses all seas and all lands where the frost does not touch it, and it has the power of self re-production, in an atmosphere higher than 80° of Fahrenheit's thermometer, if it can find food and subjects to subjugate.

An able writer in the North American Review, says, that "the application of quarantine laws ought not to be regulated in reference to the places from which vessels arrive, *but by the state in which they arrive*. There is no cause for detaining a ship on account of the danger of yellow fever, which is itself in a pure and healthful state, from whatever port she may have sailed, nor however sickly that place may have been. On the other hand, no ship that is foul and offensive, or that has a cargo in a putrid state, although the place from which she sailed, or the persons on board be ever so free from sickness, ought to be permitted to approach the town until she has been thoroughly cleansed. There ought to be a rigorous system of inspection, during the summer and autumn, into the state of every ship which has a

cargo of a perishable nature, while she is discharging. In this manner the danger, when it exists, will be detected before it can have extended to any considerable number of persons, and will be promptly removed.*

This principle of quarantine must of necessity be true, for the varying circumstances of commerce cannot be apprehended, and her varying attendant evils cannot be prevented by arbitrary laws. It must be subject to human perception and human control. The chart may be perfect, the ship staunch and properly put at the helm, but the storm, the tide, the channel or current, make it absolutely necessary for her to be managed by a skillful pilot or she never finds her port. The anchor and cable may be good while lying upon the deck, but they can never hold the ship in safety unless they are cast off, and perhaps not even then, unless cast off in good anchorage ground. Specific instruction or definite laws cannot supply the place of human intellect. It may direct, but if it is to compass changing circumstances, and produce good and safe results, it must be kept within the bounds the God of Nature has prescribed for it.

A large discretion must therefore be given to a health officer, and he should be a man who has science and medical skill to guide him aright, and courage and patriotism to enable him to do his duty. With these he may err and err honestly, and consequently those his decisions may affect, should have the right to seek counsel from others, and if he does err, they find relief. The sources of this counsel should be found among the various interests to be affected, and at the same time as nearly to an executive decision as possible, for a delay may be even worse than the act required to be done.

The right of appeal, and the sources for appeal, as provided in the bill the committee have proposed for the consideration of the Legislature, embrace an officer of the State, a Mayor of the city by a popular vote, and a licensed medical practitioner, nominated by a chamber of commercial men, acting under the guardianship of the State, which nomination is to be approved of by the board of health, and from them he receives his appointment. This combination must inspire confidence, for it has all the elements of the institutions we so highly prize.

* North American Review, vol. 10, p. 414.

The bill has another feature which the committee hope will commend it to the patriotic citizens who are called officially to legislate for the people of the State. It gives relief to the immigrant seeking our shores, whoever he may be, for one year after he pays his contribution on arriving at the port of New-York, provided he comes to the hospital door and shows that he is sick with a temporary disease.

This additional benefit the committee are happy to find in the suggestions of the resident physician, and that the grounds and hospital buildings are, in his estimation, sufficiently large for this purpose.* As the effect of this provision cannot be precisely foreseen, the committee think that this provision should not now be extended beyond one year, which will probably leave a surplus without increasing the amount now required to be paid as hospital money.

The operation of the present law has given hope, but it has been deferred and the heart made sad, for the moment the man of sickness, or the woman of misfortune, or the child of disease, had passed the quarantine ground, that moment they ceased to have any claims upon the Marine Hospital for relief. It is this feature in the law as it now exists, which the committee have been informed started the inquiry as to its justice, its constitutionality. The persons interested asked why the immigrant who paid his money could have no benefit from it after he came to the city; and in their inquiries they learnt that there were surplus moneys, which were appropriated to other purposes, notwithstanding the law itself provides that the surplus "shall remain appropriated to supply any deficiency that may occur of the annual funds, to meet the annual expenses of the hospital, and to defray the expenses of erecting such other hospitals or buildings as the Governor may from time to time direct."† The Legislature evidently intended that all the moneys collected from this source should be expended for the benefit of the immigrant, and the sustaining of a good quarantine establishment, by funding any surplus which might be obtained in one year, to make up any deficiency for any cause in a subsequent year. It was a specific tax for a specific purpose.

The committee suggest with great diffidence, however, that the diversion of any of these funds is unjust, though, perhaps, not technically or legally wrong. And if the committee comprehend one of the points taken in the late argument before the Supreme Court of the United

* See communication from Dr. Vaché.

† Revised Statutes, chap. 14, title 4, section 14.

States, by the present able Attorney-General of the State, the view of the committee is sustained by him.

"The end of the quarantine laws," says the Attorney-General, "is the health of the city of New-York, and of those who enter it. The means, a tax upon passengers." The tax being a "common law toll," rather a statute law toll, and levied for the health of New-York and for those who enter it, the *toll should be devoted to the specific object for which it is levied*, and if it is appropriated to any other purpose, injustice is certainly meted out to the toll-payers, even if no constitutional right is violated. If so, it is unbecoming a great and magnanimous State to allow it.

The committee have not, however, proposed to restrict the operation of the present law in regard to the surplus moneys, if any, but to extend the benign influence of the laws to the toll-payers, and consequently the surplus will be less. This change will take away a great cause of complaint, and perhaps satisfy perfectly those who now think the law oppressive.

The committee propose another alteration in the laws which relieves this same class of persons on their arrival at the port of New York from Europe, if they are well and in a cleanly condition, by allowing them to come to the city on ship board. From the testimony taken, it will be perceived that the present law is useless and unnecessarily oppressive, and in addition to this, there is evidently a great error in obliging three or four hundred persons, perhaps a thousand, to be landed at quarantine ground, who, from their condition while on the voyage, are peculiarly liable to take an epidemic or contagious disease the moment they land, if one exists. The object of quarantine laws is to prevent the importation of disease, and if imported, its spreading. But it is apparent that this feature of the present law increases the danger of its spreading, if it has been imported or exists at the quarantine.

The confining of vessels conditionally admitted to the city, north of particular streets, now appears absurd, for on examining the table annexed,* and a map of the city, it will be perceived, that a great proportion of its population do not reside near that part of it, supposed by the present law to be most exposed. That if there is wisdom in making a distinction in parts of the city, the order, now observed, should

* See table No. 2.

be reversed. Every one in the least conversant with the location of the inhabitants of New-York, knows that but comparatively few persons reside in the vicinity of the rivers, south of 8th street on the East river, and Bank street, on the North.

The numerous changes which the committee have suggested by the bill they have drawn, will be readily perceived in comparing it with the present system of quarantine. The prominent changes have been before alluded to, still there are others of comparatively slight importance, which, with the prominent ones, the committee hope will commend the bill to the favorable consideration of the Legislature. A perfect system of quarantine* cannot be expected, and should the bill proposed become a law, its practical operation will doubtless suggest important alterations which would, if now made, have the appearance of hasty legislation, upon a grave and important subject.

In forming the conclusions at which the committee have arrived, and in drawing the bill they have proposed, they have sought information from all sources within their power. They met in the city of New-York in July, and personally examined the quarantine grounds, visited vessels at quarantine, ships that had just arrived with immigrants, the wharves and docks in the city of New York and Brooklyn, the shipping and the cargoes at the wharves, gave publicity of their meeting to merchants and others interested in commerce and navigation, sent circulars and interrogators to physicians,* addressed notes upon the subject of their appointment to the mayors of New-York and Brooklyn, the board of health, the health officer and health commissioners, and others who were believed to possess practical or theoretical knowledge on the subject of quarantine and yellow fever. These labors were interrupted by the great fire which took place in the city, and which diverted the attention of its citizens and others from the objects desired by the committee. This untoward event induced the committee to defer their labors to a subsequent period. In the meantime they received a number of articles from physicians and others whom they had addressed, which are annexed, and which need no praise, as they manifest their own merit by their evidence of labor and learning. With one single exception, a disposition has been evinced by medical gentlemen, to whom circulars were addressed, to confer favor upon the State by giving to her citizens the benefit of

* See Circular and Interrogatories.

their learning and experience, and the committee would do injustice to their own feelings if they did not take this opportunity to express their thanks for these favors. The testimony taken has been obtained from many of the most experienced and successful merchants in the city, and every one in the city has had an opportunity of being heard on the subject of quarantine or public health.

The communication from Dr. Vaché, the able resident physician, embodies, as the committee is informed, his own views and those of the health officer and the health commissioner. All the communications received and testimony taken, which the committee deemed useful in the examination of the subject of quarantine at the port of New-York, together with the bill proposed by the committee, are appended to their report.

All which is respectfully submitted.

D. E. WHEELER,
C. COMSTOCK,
R. H. HINE,
Committee.

AN ACT

Concerning Quarantine, and Regulations in the nature of Quarantine, at the Port of New-York.

The People of the State of New-York, represented in Senate and Assembly, do enact as follows :

SECTION 1. The anchorage ground for vessels at quarantine, shall be near the marine hospital, on Staten Island, and be designated by buoys to be anchored under the direction of the health officer, and every vessel subject to quarantine shall, immediately on her arrival, anchor within them, and there remain with all persons arriving in her, subject to the examinations and regulations imposed by law.

§ 2. Vessels arriving at the port of New-York, shall be subject to quarantine as follows :

1. All vessels direct from any place where yellow, billious-malignant, or other pestilential or infectious fever existed at the time of their departure, or which shall have arrived at any place, and proceeded thence to New-York, or on board of which, during the voyage, any case of such fever shall have occurred, arriving between the thirty-first day of May and the first day of October, shall remain at quarantine, for at least thirty days after their arrival, and at least twenty days after their cargo shall have been discharged, and shall perform such further quarantine as the health officer shall prescribe.

2. All vessels embraced in the foregoing subdivision, arriving between the first day of April and the first day of November, exclusive of the time in said subdivision mentioned ; all vessels from a foreign port, on board of which during the voyage, or while at the port of departure, any person shall have been sick, or from any place, in the ordinary passage from which they pass south of Cape Henlopen, arriving between the thirty-first day of May and the sixteenth day of October ; and all vessels from any place (including islands) in Asia, Africa, or the Mediterranean, or from any of the West India, Bahama, Ber-

muda or Western islands, or from any place in America, in the ordinary passage from which they pass south of Georgia, arriving between the first day of April and the first day of November, shall be subject to such quarantine, and other regulations, as the health officer shall prescribe.

§ 3. It shall be the duty of the health officer, to board every vessel subject to quarantine, or visitation by him, immediately on her arrival ; to inquire as to the health of all persons on board, and the condition of the vessel and cargo, by inspection of the bill of health, manifest, log-book or otherwise ; to examine, on oath, as many, and such persons on board of vessels suspected of coming from a sickly port, or of having had sickness on board during the voyage, as he may judge expedient, and to report the facts, and his conclusions, to the board of health in writing.

§ 4. The health officer shall have power,

1. To remove from the quarantine anchorage ground any vessel he may think unsafe, to any place south of the quarantine buoys, and inside of Sandy-Hook.

2. To cause any vessel under quarantine, when he shall judge it necessary for the purification of the vessel or her cargo, to discharge her cargo at the quarantine ground, or some other suitable place out of the city.

3. To cause any such vessel, her cargo, bedding, and the clothing of persons on board, to be ventilated, cleansed and purified, in such manner, and during such time, as he shall direct ; and if he shall judge it necessary, to prevent infection or contagion, to destroy any portion of such cargo, bedding or clothing, which he may deem incapable of purification.

4. To prohibit and prevent all persons, arriving in vessels subject to quarantine, from leaving quarantine, until fifteen days after the sailing of their vessel from her port of departure, and fifteen days after the last case of pestilential or infectious fever that shall have occurred on board, and ten days after her arrival at quarantine, unless sooner discharged by him.

5. To permit the cargo of any vessel under quarantine, or any portion thereof, whenever he shall judge the same free from infection and contagion, to be conveyed to the city of New-York, or such place therein as he may designate, after having reported in writing to the

mayor of said city the condition of said cargo, and his intention to grant such permission ; such permission, however, to be inoperative without the written approval of the mayor or commissioners of health.

§ 5. The health officer, the board of health, or the mayor and commissioners of health, may, if in their opinion it will not be dangerous to the public health, permit the cargo of any vessel under quarantine, or any part thereof, to be shipped for exportation by sea, or transportation up the North or East rivers, but if the vessel receiving the same, shall approach nearer than three hundred yards to the wharves of the city, such cargo may be seized, and sold by the commissioners of health, for the use of the marine hospital.

§ 6. Every vessel, during her quarantine, shall be designated by colors, to be fixed in a conspicuous part of her main shrouds.

§ 7. No vessel or boat shall pass through the range of vessels lying at quarantine, or land at the quarantine ground after sun set, without the permission of the health officer.

§ 8. No lighters shall be employed to load or unload vessels at quarantine, without permission of the health officer, and subject to such restrictions as he shall impose.

§ 9. All passengers under quarantine, who shall be unable to maintain themselves, shall be provided for by the master of the vessel in which they shall have arrived, and if the master shall omit to provide for them, they shall be maintained on shore at the expense of such vessel, and such vessel shall not be permitted to leave the quarantine, until such expense shall have been repaid.

§ 10. The health officer, upon the application of the master of any vessel under quarantine, may confine in any suitable place on shore, any person on board of such vessel charged with having committed an offence punishable by the laws of this State, or of the United States, and who cannot be secured on board such vessel, and such confinement may continue during the quarantine of such person, or until he shall be proceeded against in due course of law, and the expense thereof shall be charged, and collected, as provided in the last preceding section.

§ 11. All vessels and persons, remaining at quarantine on the first day of October, shall thereafter be subject to such quarantine and restrictions, as vessels and persons arriving on or after that day.

§ 12. The mayor, or the board of health, or the commissioners of health, whenever in their judgment the public health shall require it, may order any vessel, at the wharves of the city, or in their vicinity,

to the quarantine ground, or other place of safety, and may require all persons, articles, or things, introduced into the city from such vessel, to be seized, returned on board, or removed to the quarantine ground. In case the master, owner, or consignee of the vessel cannot be found, or shall refuse or neglect to obey the order of removal, the mayor, the board of health, or the commissioners of health shall have power to cause such removal, at the expense of such master, owner, or consignee; and such vessel or persons shall not return to the city, without the written permission of the board of health, the mayor, or commissioners of health.

§ 13. If any vessel arriving at the quarantine ground, subject to quarantine, shall be bound to some port east of the city of New-York, the health officer, after having duly visited and examined her, may permit her to pass on her voyage through the sound; but no such vessel shall be brought to anchor off the city, nor shall any of her crew or passengers land in, or hold any communication with the city, or any person therefrom.

§ 14. No vessel, found on examination by the health officer to be infected with the yellow fever, or to have been so infected, after sailing from her port of departure, shall be permitted to approach within three hundred yards of the city of New-York, between the first day of May and the first day of October in the same year.

§ 15. The master of every vessel released from quarantine, and arriving at the city of New-York, shall, within twenty-four hours after such arrival, deliver the permit of the health officer at the office of the mayor and commissioners of health, or to such person as they shall direct, but such vessel shall not approach within three hundred yards of the city of New-York, without the written permission of the mayor and commissioners of health.

§ 16. Every vessel having had, during the voyage, a case of small-pox, or infectious or contagious disease, and every vessel from a foreign port having forty or more passengers, and not herein before declared subject to quarantine, shall, on her arrival at the quarantine ground, be subject to visitation by the health officer, but shall not be detained beyond the time requisite for due examination, unless she shall have had on board, during the voyage, some case of smallpox, or infectious or contagious disease, in which case she shall be subject to such quarantine as the health officer shall prescribe; and it shall be the duty of the health officer, whenever he

thinks it is necessary for the preservation of the public health, to cause the persons on board of any vessel to be vaccinated.

§ 17. Nothing in this act contained shall prevent any vessel arriving at the quarantine from again going to sea before breaking bulk.

§ 18. The commissioners of health shall admit into the marine hospital any passenger who shall have paid hospital moneys, during any temporary sickness, within one year after such payment.

§ 19. The chamber of commerce in the city of New-York, is hereby authorized to nominate, at its annual meeting on the first Tuesday of May in each year, a licensed medical practitioner in and resident of the city of New-York, as a commercial physician, to be approved of and appointed by the board of health, who shall take and file an oath of office, as required by law, of the health commissioner, and shall hold his office for one year, and until his successor is appointed, and has taken the oath of office; and in case of a vacancy, a nomination may be made for the residue of the term, at any regular meeting of said chamber, and the office filled in like manner; and such commercial physician shall be a member of the health board of appeal, and receive for each day's attendance as a member thereof, five dollars, which shall be paid out of the moneys appropriated for the use of the marine hospital; and in case the chamber of commerce neglects or refuses to make such nomination, then it shall be the duty of the board of health of the city of New York to nominate and appoint a licensed medical practitioner as commercial physician, who shall have the same powers and duties as if nominated by said chamber of commerce and appointed by said board of health.

§ 20. The mayor of the city of New-York, the resident physician, and the commercial physician, shall constitute a health board of appeal, to which any person may appeal from any decision of the health officer.

§ 21. Every appeal from a decision of the health officer shall be made by serving upon him a written notice of such appeal, within twelve hours after such decision, (Sundays excepted,) and the health officer shall make a return in writing, including the facts on which the decision is founded, within twelve hours after the receipt of such notice, (Sundays excepted,) to the mayor, who shall immediately call a meeting of the health board of appeal, and shall be president of said

board, and said appeal shall be heard and decided within twenty-four hours thereafter, (Sundays excepted,) and the execution of the decision appealed from shall be suspended until the determination of the appeal.

§ 22. In the hearing and determination of appeals, said board shall possess the same powers as are conferred by law upon the health officer in respect to the subject matter thereof, and may take such further testimony, and make such further examination as they shall deem expedient, and may affirm or reverse, in whole or in part, the decision of the health officer, or make a new order in the premises ; and the decisions of said board shall have the same force and effect, and be executed in the same manner, as those of the health officer. The testimony taken by said board, and their decisions, shall be in writing, and shall be filed, together with the return of the health officer, with the health commissioner, who shall be secretary of said board.

§ 23. Every master of a vessel subject to quarantine or visitation, arriving in the port of New-York, who shall refuse or neglect either :

1. To proceed with, and anchor his vessel at the place assigned for quarantine, at the time of his arrival :

2. To submit his vessel, cargo, and passengers to the examination of the health officer, and to furnish all necessary information to enable that officer to determine to what length of quarantine and other regulations they ought, respectively, to be subject ; or

3. To remain with his vessel at quarantine during the period assigned for her quarantine ; and while at quarantine to comply with the directions and regulations prescribed by law, and with such as any of the officers of health, by virtue of the authority given to them by law, shall prescribe in relation to his vessel, his cargo, himself, or his crew, shall be guilty of a misdemeanor, and be punished by a fine not exceeding two thousand dollars, or by imprisonment not exceeding twelve months, or by both such fine and imprisonment.

§ 24. Every master of a vessel hailed by a pilot, who shall either :

1. Give false information to such pilot relative to the condition of his vessel, crew, passengers or cargo, or the health of the place or places whence he came, or refuse to give such information as shall be lawfully required :

2. Or land any person from his vessel, or unlade or tranship any portion of his cargo, before his vessel shall have been visited and examined by the health officer :

3. Or shall approach with his vessel, nearer the city of New-York, than the place of quarantine, to which he shall be directed :

Shall be guilty of the like offence, and be subject to the like punishment. And every person who shall land from any such vessel, or unlade or tranship any portion of her cargo, under like circumstances, shall be guilty of the like offence, and be subject to the like punishment.

§ 25. Every person, who shall violate any provision of this act, or neglect or refuse to comply with the directions and regulations, which any of the officers of health may prescribe, shall be guilty of the like offence, and be subject for each offence, to the like punishment.

§ 26. Every person, who shall oppose or obstruct the health officer in performing the duties required of him, shall be guilty of the like offence, and be punished by fine not exceeding five hundred dollars, or by imprisonment not exceeding three months, or by both such fine and imprisonment.

§ 27. Every person, who, without the authority of the health officer or board of health, shall go within the enclosure of the quarantine ground, shall be guilty of the like offence, and be punished by fine not exceeding one hundred dollars, or by imprisonment not exceeding thirty days, or by both such fine and imprisonment.

§ 28. Every person, who shall go on board of, or have any communication, intercourse, or dealing with any vessel at quarantine, without the permission of the health officer, shall be guilty of the like offence, and be subject to the like punishment. And such offender shall be detained at quarantine, so long as the health officer shall direct, not exceeding twenty days, unless he shall be taken sick of some pestilential or infectious disease.

§ 29. Every person who shall violate the provisions of the fifth article, of Title Second, of Chapter Fourteenth, of Part First of the Revised Statutes, by refusing or neglecting to obey, or comply with, any order, prohibition or regulation, made by the board of health in the exercise of the powers therein conferred, shall be guilty of a misde-

meanor, punishable by fine and imprisonment, in the discretion of the court by which the offender shall be tried.

§ 30. Articles First, Third, Fourth, and Sixth of Title Second, of Chapter Fourteenth, of Part First of the Revised Statutes; an act entitled "An act to amend Title Second, Chapter Fourteenth, Part First of the Revised Statutes, relating to the quarantine regulations of the port of New-York," passed May 2, 1836; an act entitled "An act relative to the quarantine laws," passed May 7, 1839; an act entitled "An act to amend the Revised Statutes relating to the public health," passed April 12, 1842, and all other laws inconsistent with this act, are hereby repealed.

[illegible]



DOCUMENT No. 1.

Description of the Quarantine Grounds and Hospital Buildings.

The land belonging to the Quarantine establishment, is situated on the northeasterly point of Staten Island, and contains about thirty acres of land, and is high ground sloping towards the water, by which it is bounded on the east. It is $5\frac{3}{10}$ miles southwest of the most southerly point of the city of New-York.

The largest hospital building is three stories high, 136 feet in length and 28 feet in width, with wings at each end, thirty-seven feet by twenty-eight feet.

The hospital building near the water is three stories high, fifty feet in length, and forty-five feet in width, with wings at each end, 66 feet by 26 feet. These hospital buildings can accommodate four hundred patients.

The smallpox hospital building, is two stories high, piazzas in front and rear, 80 feet in length and 28 feet in width, and can accommodate fifty patients.

The health officer's house. The main building is 38 feet by 30, two and a half stories high, with a wing 35 feet by 20 feet, which is one and a half stories high.

The deputy health officer's house. The building is 44 feet by 26 feet, two stories and a half high, with a piazza on three sides.

The house occupied by the assistant physician, is 36 feet by 25, two stories high, with piazzas on three sides.

The house occupied by the steward and farmer, is 50 feet by 20 feet, one and a half stories high.

The work-house is eighty feet by twenty feet, one and a half stories high.

Six houses for bargemen, each thirty feet by twenty feet.

The office is 24 feet by 20 feet. The boat-house 32 feet by 31 feet, and built upon a platform supported by piles.

A carpenter's shop, 36 feet by 20 feet, and the upper part of it is reserved and used for storing the effects of those who are sick at the hospital.

The ice and coal-house together, is 70 feet by 20 feet

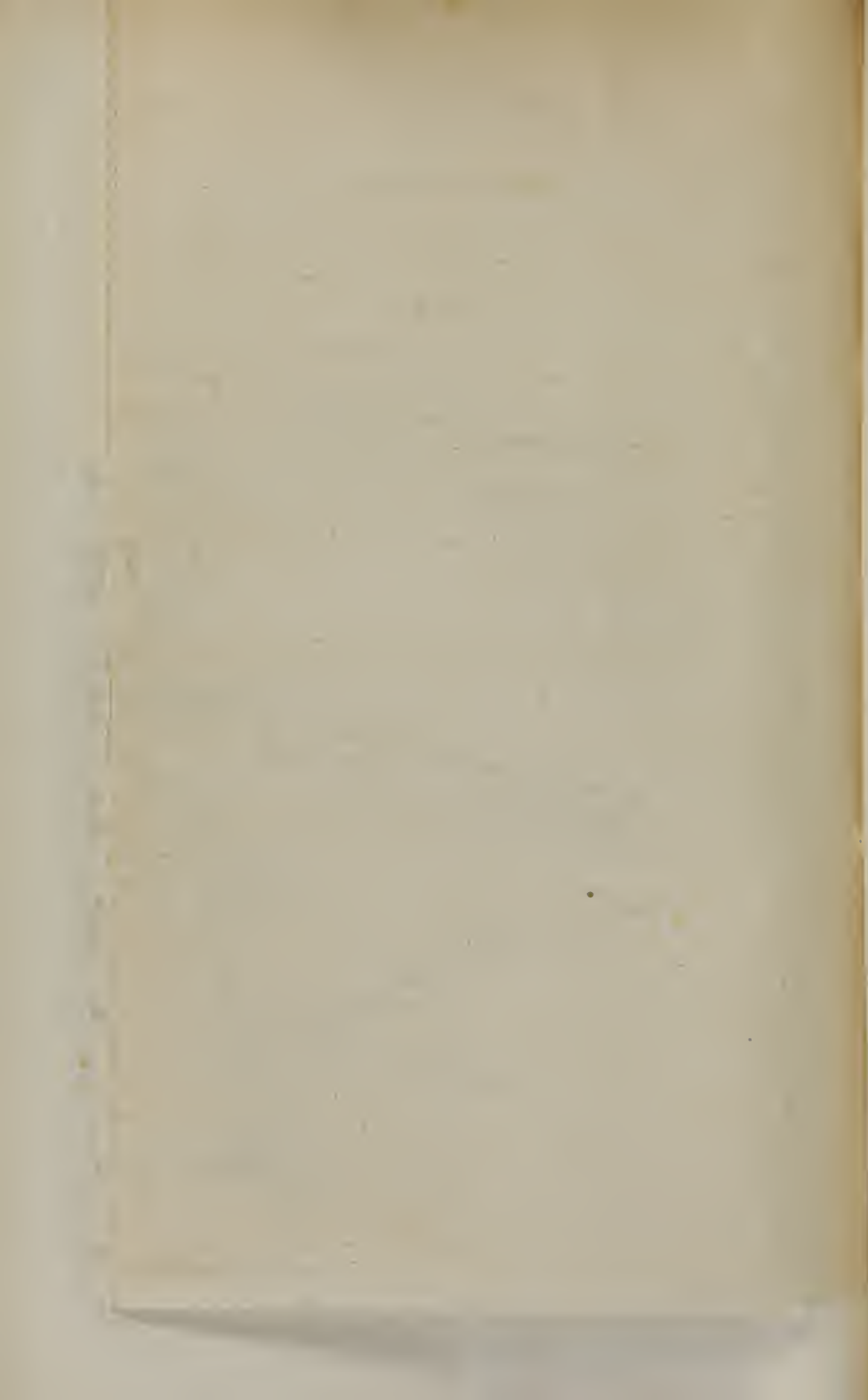
The waggon house is 32 feet by 20 feet.

The barn is 50 feet by 36 feet.



MAP OF THE
AIRLINE HOSPITAL GROUND,
Staten Island

Red line shows the boundary of the
Airline Hospital Ground. M. and H. are the
names of the streets.



CIRCULAR No. 1.

Circular and Interrogatories addressed to Medical Gentlemen.

New-York, July 29th, 1845.

DEAR SIR—The undersigned were appointed by the popular branch of our Legislature, at its late session, a committee to perform the duties imposed by the following resolution:—

Resolved, That a committee of three be appointed to examine the Quarantine laws of the port of New-York, to take testimony in relation thereto, and to report the facts and such alterations in the said laws as in their opinion shall be expedient, at the next session of the Legislature.

In the discharge of their duty, they are anxious to obtain all the assistance within their power, and the science and skill of the medical profession seemed to them to combine the first and safest guide in their deliberations, that their results might preserve the health of our citizens, and at the same time free commerce from all unnecessary burdens; and we therefore beg leave to request your views relative to the accompanying questions. These questions are intended rather to indicate the topics concerning which we desire information, than to restrict your reply; and we shall be gratified to receive suggestions on any point which may seem to you important, although not herein particularly mentioned. We are aware that a compliance with our request will impose considerable labor upon you, but we are persuaded that you will not hesitate to give our citizens the benefit of your learning and experience.

An early answer to this communication, directed to D. E. Wheeler, Esq., 62 Wall-street, New-York, will be very gratefully received by,

Yours, respectfully,

DAVID E. WHEELER,
CALVERT COMSTOCK,
REUBEN H. HINE,

Committee.

INTERROGATORIES.

1. Is the yellow fever of domestic origin at the port of New-York ?
2. Is the yellow fever imported by sea into this port ; and if so, at what seasons and from what countries or ports is it likely to be imported ?
3. If imported, in what way is its importation most likely to occur—by vessels, cargoes, or passengers, &c., &c., and from which source is there the most danger ?
4. If a vessel arrive from a sickly port, without any sickness on board during the passage, and on inspection by the proper officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection—if not, how long after ?
5. If a vessel arrive from any port in whatever latitude, such port being healthy at the time of the departure, without any sickness on board during the passage, and on inspection by the proper officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection ?
6. Would the length of time occupied by the passage from port to port have any effect upon the answers to be given to the two last questions ?
7. If a vessel arrive from Europe, having had no infectious or contagious disease during the voyage, and the passengers on her arrival all healthy, is it prudent to allow the vessel with her passengers to come immediately to the city.
8. In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit their cargoes to be brought to the city ; and if so, ought there to be a discrimination as to the articles, and what articles of merchandize are most likely to communicate disease ?

9. In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit the passengers immediately to enter the city ?

10. Will fruits, vegetables, or animal matter, while in a vessel, *originate* the malignant yellow fever ; and if so, from which is there the most danger ?

11. Has the introduction of the Croton water rendered the city of New York less liable to be visited by the yellow fever ; and will it prevent its spreading, should cases of it occur ?

12. Is the malignant yellow fever the same as the prulam fever on the coast of Africa, and does it originate there, and, if prevalent in any other place, is it modified by climate ?

13. Is the yellow fever communicated by personal contact, or by an infected atmosphere, or both ?

14. What effect has the progress of medical science had upon the policy of enlightened governments in relation to Quarantine laws ?

The first of these is the fact that the
 of the system is not a simple one, and
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COMMUNICATIONS
FROM
MEDICAL GENTLEMEN,

IN ANSWER TO

A Circular and Interrogatories addressed to them by a Select Committee of
the House of Assembly, relative to

YELLOW FEVER AND QUARANTINE.

1845.

ANSWERS OF ALEX. F. VACHÉ, M. D.

New York, Nov. 5th, 1845.

GENTLEMEN—

I had the honor to receive your communication in relation to the quarantine laws of this State, and in reply to the several interrogatories, I shall confine my remarks, with slight digression, to the main question at issue—can yellow fever be conveyed from one place to another through the medium of vessels, merchandise, clothing, or persons?

The domestic or foreign origin of the disease, wherever it has appeared, has occupied the attention of the most distinguished men in the medical profession, and has frequently led to controversies as little profitable to science as to the characters of the contending parties. The subject, at this day, is as doubtful as it was at the commencement of the discussion, and will probably continue so, as long as physicians identify honor with pride of opinion, and partizans suit facts to theories, with predetermination not to be vanquished. Much has been published on both sides of the question worthy of consideration; each party has collected with unwearied labor all the information to be obtained with equal talents and equal learning, and still, the origin of yellow fever out of Africa is a theme on which volumes will, doubtless, be written for years to come, and perhaps until the end of time.

I am aware it is alleged that yellow fever has spontaneously appeared on different occasions in several interior portions of our country, and I am also aware it is said to have exhibited itself in the cities and towns of sea-ports, when not traceable to any vessels connected with it; but I dispose of the one with the opinion, that the disease arose from local miasm of so fatal a character as to lead to the conclusion of its identity with yellow fever, especially as it is well known to practical physicians that the general symptoms of acute malignant fevers are very similar, and frequently require the nicest judgment of

the most experienced practitioner to decide one type from the other. Of the other, I say, it is but negative testimony when the contrary has been so frequently established, and of doubtful accuracy, where the desire of health officers, to avoid censure, and the interests of owners and officers of suspected vessels, are taken in consideration. In New York, yellow fever has always appeared in the vicinity of shipping, while in other portions of the city where human beings are piled on each other, in the most degraded and miserable condition, amidst heaps of accumulated filth, and loads of animal and vegetable putrefaction; where, hunger and nakedness stalk abroad at noonday, exposed to the fiercest rays of a summer's sun, and where the unfortunate inhabitants are driven to their damp, ill-ventilated and loathsome rooms, for partial shelter, and temporary protection, during the pitiless storm, *it has never been known.*

My own views are strongly in favor of the African* origin of the disease, and I am decided in the opinion of its *specific character*. In my judgment, many of the apparent contradictions, in relation to it, have arisen from the blending of it, with its twin-sister, epidemic malignant bilious remittent fever, by persons not sufficiently familiar with both diseases, at the bed side, to distinguish between them. Its very exception to all other forms of fever, in being arrested by frost, seems to me conclusive, at least, of its tropical origin. But, admit it can be endemic, or local, and will prevail wherever the combination of causes essential to its development exists, does it establish, that the disease cannot be conveyed from other portions of the globe, and disseminated wherever the pestilence is transmitted, distributing devastation and death, to those within its fatal influence? Of this, however, enough.

To enter into the argument in extenso, would lead to a lengthened analysis of the subject, too voluminous, perhaps, for the occasion. Be it, therefore, as it may, the object of the committee, I apprehend, is not to enter into the controversies of medical men, or to know whether yellow fever *CAN* be of domestic origin in this State, *but to ascertain if the quarantine laws are in accordance with progressive science, and whether they can be repealed, or so modified with safety to the health of the community, as to be less oppressive to the commercial interests of the country.*

* Others allege it to have originated at Siam, in Asia, and to have been brought to the West Indies in 1690. May it not have been derived from the coast of Africa?

That yellow fever can be brought to the city from abroad, or, in other words, that vessels arriving at this port from places where yellow fever prevails at the time of their sailing, may give the disease by the liberation of the specific poison, on opening the hatches, and especially, on breaking out the cargoes or ballast, to persons communicating with them, or extend it to those on shore, whether the crew be in health or not, few persons acquainted with the history of our quarantine, would be willing to deny. The instances are too positive, and too numerous to be disputed.

Take, for example, extracts copied from the official records of a correspondence between Stephen Allen, mayor, and Dr. Joseph Bayley, health officer, in relation to the cause of yellow fever, at the quarantine ground, in the summer of 1821.

After particular mention of all the circumstances connected with the infected vessels in durance, and a detailed account of numbers of them being stranded and brought in contact through the violence of a gale, it goes on to state : "The first person taken sick with the yellow fever subsequent to the gale, was Seth Waite, a lad seventeen years of age, who had performed the voyage in the ship *Lucy Ann*, last from Havana. His disease commenced on the 6th of September, as this vessel was proceeding from the quarantine ground to the city, and he died in the Lazaretto, the 11th of the same month.

"A seaman died of yellow fever Aug. 13th, on board of this ship, and the mate, who was the last person taken sick, was convalescent and walking the deck, the 20th of Aug., the day she arrived. This vessel, coming from an unhealthy port, having lost one of her crew with the yellow fever, and the mate having been sick with the same disease on the passage, were sufficient to excite our suspicion that she was an infected vessel, although she had only stone ballast on board from the time she sailed from New-Orleans until she arrived at this port, via. Pensacola and Havana, and her hatches had been off the whole voyage. It has been remarked that her ballast was all overhauled, and every part of the hold and forecastle was ventilated and white-washed; between decks were scrubbed with an alkaline solution, and afterwards varnished. This was nine or ten days before Waite was taken ill. This young man was actively employed for several hours in the afternoon and night of the third of September, during which time his clothes were drenched with rain. Three days after this, he was taken ill, which was eighteen days subsequent to any sickness

on board of his vessel. Was this disease lurking in his system for two or three weeks? Could it have been caused by the violent motion of his vessel disengaging a greater quantity of foul air during the storm, or by the vitiated air of the *Ann Maria* alone, or combining with that from his own vessel soon after she was hauled alongside of the *Ann Maria*, and thereby rendering the atmosphere about them more loaded with contagion, than either vessel could alone produce? In answer to these queries, it may be said, that the disease would have appeared immediately after his great fatigue and exposure in the gale, if it had been in his system eighteen or twenty days. If it arose from an increased quantity of affected air, disengaged during the storm by the great motion of his vessel, it probably would not have commenced as early as the third day after the gale, for not one of the cases which occurred took place in less than five days after their first exposure to infected vessels. I am, therefore, of opinion, that his disease was caused by the contagion from the ship *Ann Maria*, in addition to that of his own vessel, for his ship was hauled alongside of her the 31st of August, and he had to pass over her deck to get to the wharf. Six days after this date, he was taken ill; which period of five or six days will appear by a majority of the cases subsequently stated, to be the usual time that this disease commences after its contagion has been received in the system.

"The Rev. Dr. Hardenburgh having engaged to officiate in the church near the quarantine ground, on Sunday, September 2d, visited his friend, Capt. Wm. Van Beuren, the preceding Saturday afternoon, when he amused himself two hours in fishing on the United States' wharf, at the bows of the ships *Ann Maria* and *Lucy Ann*: he returned to the city on Sunday afternoon. The next Friday, Sept. the 7th, six days after his exposure to the contagion of the above named ships, he was taken sick, and died the 12th. If his disease was yellow fever, he, without doubt, received the infection while on the United States' wharf. Jack Britton, a colored man, worked on the U. S. wharf, at the cargo of the ship *Mary*, *L'Herondelle*, and other vessels, from Monday, September 3d, before the gale commenced, to Saturday noon, the 8th, at which time he complained that he was unwell. He went home, and died the 14th of Sept. In this case the disease began in five days after he was first employed at the U. S. wharf.

"Miss Sarah Ann Van Beuren, aged 11 years, was on the U. S. wharf Tuesday, Sept. the 4th, and near to the brig *Mentor*, which was

driven on shore before her father's house. Five days after, she was taken sick, viz. Sunday the 9th, and died the 13th of September.

“John Hawthorne, who was on a visit to his father at Staten Island, was employed several hours on Tuesday, September the 4th, in pumping out the ship *Amphion*, lying at the wharf. He was taken ill on Sunday morning the 9th, and died the 13th of September. Here we also observe the period of five days intervening between his going on board the *Amphion*, and the time he was taken sick.

“Peter Andreas, a seaman belonging to the ship *Lucy Ann*, was taken unwell, September the 9th, and died the 14th; this is a period of five days after his great fatigue in the storm on the night of the 3d, which time he would be more predisposed than before to be infected with the contagious air which was, probably, disengaged from its confinement by the concussion of the vessel against the wharf and shore.

“Edward Wilson, John Young and James Williams, with eight other men, were sent on board of the ship *Ann Maria*, Wednesday afternoon, September the 5th. They were all engaged in discharging her ballast, until Saturday afternoon, the 8th. On Monday, the 10th, they returned to Staten Island for employment, but they were taken sick in the afternoon and sheltered themselves in Captain Arnett's hay loft, until we were informed of their illness, the next day, when they were brought to the hospital, where the two first named died September the 13th, and the last on the 14th. In these three cases, we perceive the remarkable coincidence of those men becoming ill at the same time, and that in five days after they were first exposed to the contagious air of the ship *Ann Maria*.

“John Patterson, first came to the quarantine ground for employment the 5th or 6th of September, and worked on board the brig *Nancy*, from Havana, and some other vessels. On the 11th of September he was taken sick, and died the 21st of that month. Here, again, we have the same period of 5 or 6 days after this man was first exposed to contagious air before he was taken ill. A girl about thirteen years old, who carried refreshments to the dock-builders, several times a day, while they were working on the U. S. wharf, was taken ill Sept. 11th, and died on the 16th. This is a period of seven days after the gale. But the wharf was so much injured by the storm, that the men discontinued their work, until a new contract was made to

finish it. It is probable, therefore, that this girl did not go there until a day or two after the storm.

“ Christopher Chergold, three or four days after the gale, went on board the several vessels that were stranded, and also at the U. S. wharf. Five or six days after he first went on board of those vessels, he became sick, and he recovered.

“ Perry Roads, one of the dock builders who was employed either three or four days after the storm, to discharge or work at the cargo of the ship, *L' Hirondelle*, was taken sick the 12th of September, and died the 23rd. In this case we notice the same period of five or six days, after he had been working either on board, or along side of the ship *L' Hirondelle*. This man and John Patterson had, apparently, struggled through the disease. We considered them as convalescent from the 6th to the 9th day of their illness, for they had no fever, slept well, and relished their food ; but Patterson, who bled freely from the gums in the early stage of the disease, became comatose on the 9th day, when the bleeding from his gums returned, and he discharged dark coloured blood freely from his stomach and bowels. Perry Roads, on the 9th day, lost his relish for food, and although he took his drinks and medicines freely, still he became hourly weaker, and had no pulse at his wrist, twenty-four hours before his death, yet his understanding was unimpaired to the last. John White, quarantine gate keeper, was frequently on the public wharf in the performance of his duty. He slept one night on board of the brig *Mentor*, and was taken sick the 13th, and died the 18th September.

“ Another daughter of Capt. Van Beuren's, who attended her sister during the first part of her illness, was attacked with fever the 14th September, five days after she first nursed her sister. This young lady recovered. Capt. Sleight, who on the 6th of Sept., was first employed in transporting the cargoes of vessels from the public wharf to Brooklyn, took in a second load on Saturday the 8th, and slept that night on board of his lighter, which was lying at the U. S. wharf. He mentioned to his relations, when sick, that the last bale of cotton he put on board of his boat, was so offensive as to produce excessive vomiting, and he was impressed with the belief that he caught the fever from it. But I am of the opinion that the languor which, consequently, ensued after violent vomiting, and his apprehension of danger from the cotton, predisposed him to be infected by the contagious atmos-

phere, which at that time prevailed about the the wharf, and in which he slept the same night. He was taken sick the 14th of September, in the morning, five days after he slept at the public wharf, and died on the nineteenth. Capt. Wm. Arnett, an inspector of the Custom House Department, was informed on Tuesday afternoon, Sept. the 11th, that three men were sick in his hay loft near to his house; as he was alarmed for the safety of his family, he went there to have them removed, and the same evening, at Dr. Harrison's, he expressed his apprehension, that he might have taken the fever from those men, and he was impressed with the belief that he would get safely through the season, provided he should escape that exposure. Early the next day he removed his family to Elizabethtown, and on Tuesday morning, Sept. 16th, when there on a visit, he was taken sick. This was precisely five days after he was in the hay loft with the sick men, and he died the 20th of that month. While the brig *Andreas* was lying at the U. S. wharf, her Captain, Andrew Rouning, and Michael Dolman, one of her seamen, were taken ill on the 17th of September, and James Watkins, a seaman, who belonged to the schooner *Native*, then at the south side of Staten Island, also sickened the same day. The first recovered, and the two last, died on the 23rd of September. Francis Morgan and Peter Howard, went to work on board the ship, *Ann Maria*, the 12th of Sept., with sixteen other men, and continued there till the afternoon of the 18th. The same evening, they began to complain. This was six days after they were first exposed to the contagion of this vessel; they both recovered.

"Capt. Van Beuren, was taken ill on the 23rd of Sept., and recovered. Magnus Landbour, a seaman who belonged to the brig *Andreas*, sickened on the 26th of Sept., and recovered. Ephraim Tompkins, the last person who was taken sick with yellow fever at the Quarantine Ground, went on board the ship *Ann Maria*, with seven other men, on the second of October. He became ill on the 7th, five days after he was first employed in this vessel, and he died on the 11th.

"All those persons whose cases have now been stated, were either on board or alongside of infected vessels, except Capt. Van Beuren's daughter, who was attacked the day after her sister was buried. We are led to observe the remarkable circumstance, that twelve of those twenty-five cases, were taken sick on the fifth and sixth day after they were first exposed to infected vessels, viz: The Rev. Mr. Hardenburgh, Jack Britton, Miss Sarah Ann Van Beuren, John Hawthorn,

Edward Wilson, John Young, James Williams, John Patterson, Christopher Chergold, Francis Morgan, and Peter Howard. This important fact may enable us to account for the disease occurring at the precise period of five and six days, in seven more of the twenty-five cases, viz : Seth Waite, Peter Andreas, the girl who attended on the dock builders, Perry Roads, Miss Mary Ann Van Beuren, Captain Slaight, and Captain William Arnett, who before that time, had been in an infected atmosphere, yet they escaped the disease until they were exposed to a more concentrated contagion, or having at such particular time a greater predisposition to take the fever than they had before. The remaining six persons, viz : John White, gate-keeper, was taken ill twenty days after the infected vessels were brought to the wharf, and nine after the brig Mentor was driven on shore very near the place where he was stationed to keep the gate ; but when he slept on board the brig Mentor, cannot be ascertained : Captain Rounding, Michael Dolman and James Watkins, sickened thirteen days after their vessels were driven to the wharf : Magnus Landbour was taken ill twenty-two days after the same period, and Captain Van Beuren one month after the infected vessels were hauled to the United States wharf, and nineteen days after the gale. If the inquiry had been made, it is probable that some special circumstances, might have been discovered in each of those six cases, five or six days previous to their illness, as occurred in the seven cases before stated. But our attention was not drawn to the fact, that so many of those persons who had the yellow fever, were taken sick at this particular period after their exposure to the cause of it, until the pestilence had ceased and they were discharged or had died. It may be well to remark, that Capt. Van Beuren removed with his family, Saturday Sept. 15th, from the Quarantine Ground, to a place where he was breathing a pure atmosphere. This would make him more liable to take the disease when he opened the stores on Monday, as the infected air in them would probably be rendered more malignant by their being shut up on Sunday, six days after he was taken sick.

“The Sinclair family have not been enumerated in the order they sickened, with the other persons who had the yellow fever, because, all those persons had been previously exposed to the infected vessels ; and although, Capt. Wm. Arnett and Miss Mary Ann Van Beuren, appeared to have derived their disease from personal contagion, yet the evidence may not be considered conclusive. It has been stated,

that the Sinclairs resided in the north basement story of the hospital, 940 feet from the U. S. wharf, and 275 feet from the brig Copernicon, the nearest vessel to their abode. She was from St. Jago de Cuba, and her crew had been healthy the whole voyage. After she was driven on shore, the mate's wife and child lived on board, with impunity, twenty days, during which time the damaged cargo was discharged. Mr. Vanderbilt's family, consisting of ten persons, lived 125 feet nearer to this vessel than Sinclair's, and the same wind that would blow the foul air of this vessel upon the dwelling of the latter, would also carry it to the former; nevertheless, Mr. Vanderbilt's family all enjoyed good health. The brig Andromache, was also 125 feet nearer to Vanderbilt's, and 50 feet nearer to my residence than to Sinclair's. Hence it may be inferred they did not take the disease from those two vessels, or all those persons from the city who resided on board, and the two families before mentioned, whose members were more than three times as numerous as the Sinclair family, could not have escaped the disease. As we do not know how far contagious air may be conveyed by a current of wind, and produce its deleterious effects, it may be contended that the Sinclairs derived their sickness from the infected air of other vessels, although at a greater distance from their residence than those two brigs. I would reply, that no other vessel suspected to be infected, but those two brigs, were nearer to their residence than 750 feet, and as four out of six families, whose houses are within the limits before described, lived twice as near to those vessels as the Sinclair's, and continued healthy, with the exception of Capt Arnett, their disease cannot be traced to that source. In further corroboration of those inferences, we have one fact directly in point, that the contagious air on board of vessels is not communicated 250 feet in a *pure atmosphere*, aided by a favorable current of wind. The ship Ann Maria, was indisputably an infected vessel, for the men who worked on board of her and were taken sick, could not have derived their disease from any other source, as she layed 630 feet from any other vessel. Now this vessel remained six weeks, only 250 feet from Mr. Fountain's house, during which time the wind frequently blew in a direction from this vessel towards his house, yet none of his numerous family or boarders, were taken sick. This vessel lay 25 feet nearer to Mr. Fountain's than the nearest stranded vessel did to Sinclair's residence. Therefore, we must look for some other cause than the above, to account for the Sinclairs' sickness; and the first inquiry would be to ascertain if they had been on the U. S. wharf, or

near to any of the infected vessels ? Both of Sinclair's daughters assured me that they had not been nearer to that wharf, or to any of the vessels, than their dwelling, for some weeks before the gale ; and they and their father informed me, that Mrs. S. never was nearer to any of the vessels than her residence, except going to and from the health officer's house twice, she passed as near as one hundred feet to the brigs Copernicon and Andromache, and about 300 feet from the other suspected vessels. James Sinclair, health office boatman, had been on the U. S. wharf, and among the infected vessels, but not after the 11th September, and as he was not taken sick before the 28th of that month, it is probable that he received the cause of his disease from another source. Having fully examined into the situation of all vessels which could have any influence in causing the sickness which prevailed in the Sinclair family, and finding none to which we can ascribe it, we will now endeavor to account for their disease from personal contagion and foul clothing. Mr. and Mrs. S. visited Hawthorn during his illness, and the 13th of September, they and their daughters were at his house, making arrangements for his funeral. Mrs. S. did not visit any other person who had yellow fever besides Hawthorn, but on Monday the 17th of September, she received the bedding and clothing of Wilson, Williams, Young, and Waite, who died on the 11th, 13th and 14th of the same month, some of which, particularly Waite's, was so filthy, that she directed her daughters to go out of the wash-house, while she carried the clothing through it to the yard, where she put them into cold water. On the 22d, early in the morning, five days after she had these foul clothing in her arms, she was taken sick, and died on the 26th of September. Her daughter Jane, from the commencement of her mother's illness, so frequently laid her head on her mother's bed and kissed her, that her father twice took her away, as he was apprehensive that she might contract her mother's disease. She was taken sick Sept. 27th, five days after her mother was first taken ill, and she died October 4th, with black vomit, previous to which time she had been three days under a free salivation. James Sinclair, was in bed with wife when her fever commenced, and he was taken sick the 28th of September, six days after he was exposed to her contagious fever. He died the 3d of October. Sally Sinclair, slept with her sister the same night that Jane was taken ill, and five days afterwards, on the 2d of October, she was taken sick and recovered. Could those four persons receive the infection from one and the same source, viz : from Hawthorn ? I am of opinion that

they did not take the disease from him, and the daughters did not go there until his death, to make his shroud, or some of them would have been taken sick in five or six days after they were at his house ; and it is probable that all of them would have been taken ill within a few hours of each other, as occurred in the cases of Wilson, Young and Williams, who went on board the ship *Ann Maria* together, and sickened in an hour or two of each other. The same circumstances happened in the cases of Morgan and Howard. But Mrs. S. was not taken sick until the lapse of eleven days, and the daughter who last sickened, not until twenty-one days after they visited Hawthorn. These reasons are conclusive, in my opinion, that the Sinclairs' did not contract their malignant fever at Hawthorn's, but, that Mrs. S. caught her's from the foul clothing she had in her arms, her husband and daughter from her, and Sally S. from her sister Jane. The three last were not exposed to the infected clothing, consequently they must have taken the fever from personal contagion. I am led to this conclusion from the important fact, that three of them became ill in five, and the other in six days, after being exposed to the special exciting causes before related ; for their becoming sick at that particular period, cannot be considered as the effect of mere accident, otherwise, it would not have occurred in nineteen cases out of twenty-five, who derived their disease from the infected vessels at the quarantine ground.

* * * * *

“From the foregoing circumstances, it is evident that the yellow fever was not generated by any local causes existing at the quarantine ground, but an imported disease, which existed in those vessels at the wharf, previous to the gale, but was, no doubt, greatly increased by it, as it brought many more infected vessels near to the wharf, and consequently augmented the quantity of infected air at that place.

* * * * *

“I am of opinion that the yellow fever is produced from a specific contagion, for the twenty-nine persons who sickened, in consequence of their intercourse with the quarantine ground, all contracted the same disease ; twenty-one of whom died, and *fourteen* of that number had that fatal symptom, black vomit. If this disease is only a higher grade of bilious fever, and is not produced by a specific contagion, but from marsh miasmata, or animal and vegetable putrefaction, as inculcated by our professional opponents on this subject, would not some of the diseases which ensue from those causes, such as bilious-remittents, remittents and intermittents, have also appeared at Staten

Island, from the same cause that occasioned the yellow fever? No idiopathic febrile complaint existed among the inhabitants in the neighborhood of the quarantine ground, previous to the gale. If, therefore, it is a fact, that yellow and bilious fevers originate from one and the same cause, a fairer test could not be conceived to show their identity, than what actually existed at that time at Staten Island. If either disease had prevailed there, doubts might have arisen, whether both fevers were not derived from the same origin. For instance, if bilious fever had prevailed at Staten Island, before the 3d of Sept., and some of the inhabitants who had been previously exposed to the miasmata which gave origin to it, should be taken ill with yellow fever, after having been exposed to its contagion on the U. S. wharf, or on board of any of the infected vessels at that place, our medical opponents would not allow that the disease was derived from the infected place or vessels, but attribute it to the same source as gave rise to the prevailing bilious fevers, and consider such a case as a proof of the identity of the cause of both diseases, and call it a higher grade of bilious fever. But we, who believe that they are different diseases, and originate from different sources, would ascribe such an occurrence to the infected vessels, and not the local causes which had previously existed, and had produced bilious fever. But the facts now before us, furnish no pretence for cavilling. As we find no febrile disease prevailing at Staten Island before the gale, we also perceive that the yellow fever was the only one which took place after it. As bilious fevers are changed into common remittents and intermittents, ought we not to meet with yellow fever changing into those diseases also, if it is only a higher grade of bilious fever? We further observe that bilious remittents, after becoming intermittents, are again converted into bilious remittents, and prove fatal. Does the same principle of transmutability obtain in yellow fever? If it does, I have never been favored with a view of such transmutation. If the dormant poison, lurking in the system of a person who has bilious fever, can be converted into yellow fever, and such change depends upon the additional causes of bad air, neglect of cleanliness, want of attendance, of suitable remedies, then I know of no place more likely to accomplish this, than the confined forecastles of coasting vessels. Many persons with bilious fever are annually received into the Lazaretto, under the above circumstances; yet I have never met with yellow fever cases in such vessels during sixteen years' residence at the Marine Hospital on Staten Island, except when it occasionally prevailed at some southern port;

although bilious fever has been nearly as fatal some seasons as yellow fever usually is, yet I have never seen it terminate in black vomit.

* * * * *

"I have now, agreeably to your request, endeavored to furnish you with a faithful narration of facts as they occurred at quarantine, and have offered some observations which appeared to me to have an immediate bearing on this important subject. *I can not suffer this opportunity to pass, without expressing my firm conviction, that rigid quarantine regulations are essentially necessary to guard the inhabitants of our commercial cities against the introduction of pestilential and infectious diseases.*"

The next instances I give, also taken from the records of the board of health, are strikingly illustrative of the difficulty of disinfecting diseased ships, even when the cargoes have been landed, and all the ordinary modes of purification strictly enforced.

"In the year 1819, the disorder was prevalent in several of the West India islands, and the fears of the board of health began to be excited that year, early in July, by the arrival at the quarantine of several vessels that had lost some of their men by yellow fever. The French ship, La Florentine, arrived at the quarantine establishment from St. Pierre, Martinique, where the yellow fever prevailed at the time of her departure, and where she had lost one of her crew. This vessel was put under quarantine for thirty days, and during that time, she underwent all the ordinary purifications, such as white-washing, fumigation, &c. &c., and on the 24th day of August the health officer reported her to the board of health, as clean, safe, and free from infection; who directed her to be anchored in the stream three hundred yards from the wharves of the city. Notwithstanding this vessel had undergone all the usual means of purifying vessels for thirty days, she, nevertheless, had two of her crew taken down with yellow fever on the third and fourth of September, when she was again ordered to the quarantine, where she laid a few days, and then went to sea; but having met with adverse weather, she returned on the 25th September, having lost her captain by yellow fever during the time she was out.*

* About this time the yellow fever made its appearance in Old Slip, and was attributed to the vicinity of this ship, and to some of the original crew who had taken board in that neighborhood, in a house where the first cases occurred.

"The brig Eliza arrived at the quarantine on the thirteenth of August, in six days from Charleston, with one sick person on board, who died on the day of her arrival. She also performed a quarantine of thirty days, during which time wind-sails were kept in her hatchways, her hold and forecandle were three times white-washed, her timbers were taken out and cleaned, and she was otherwise purified, when on the sixteenth of September she was allowed to come to the stream, three hundred yards from the wharves ; yet, after all this cleaning, *her captain died of yellow fever on the sixth of October, and on the seventh one of her crew sickened with the same disease.*"

The following interesting detail is taken from the record of 1822 :

"The facts are numerous and indisputable, that the yellow fever has been communicated to individuals who have visited vessels on board of which one or more persons have had that disease, or which vessel came from a place where it prevailed ; and they have imbibed the infection not only while the cargoes were on board, but after they were discharged, and the vessels thoroughly cleansed.

"A noted instance of this fact occurred this year, 1822, on board the United States brig, Enterprise. After the sick had been removed to the hospital, the well were landed, that they might not be any longer exposed to the infected air of that vessel, and to afford an opportunity of purifying her, which was done, by slacking lime in her timbers and whitewashing her throughout, not omitting her iron ballast, in which operation three casks of lime were used, and she was well ventilated by four wind-sails, hoisted constantly in her hatchways.

"The crew were so intemperate during the five days that they remained on shore, we were under the necessity of sending them on board again. The brig had been purified in the interim, but it was soon evident she was an infected vessel, for in six days after the crew were sent on board, four men were taken sick with yellow fever, and in the course of five or six days, seven more had the same disease, making a fourth of all the men on board, and five of the eleven taken sick, died. Those persons must have been infected after their return to the brig, and subsequently to her purification, otherwise the disease would have been excited in them, as it was in some of their shipmates, from their irregular living and exposure to the weather, by lying on the ground at night.

“Those men were more predisposed to receive infection after their return to the brig, than they were previous to their landing, in consequence of having lived in a pure atmosphere, and being debilitated by repeated intemperance. This fatal evidence of the cause of the disease still lurking in the *Enterprise*, induced us to have the crew brought on shore again, and recommence her purification, which was done by using two more casks of lime, by letting into her hold daily several feet of water, and keeping up her wind-sails. Six men were left to take charge of her, whose duty it was to pump out the water and turn the wind-sails, and they were directed not to sleep in her hold.

“Twenty-five days after her arrival, and after repeated white-washing, letting in water, and constant ventilation, one of the sailors obtained permission to take his wife on board; this woman was taken sick on the 9th of August with yellow fever, after she had been seven days on board, and she died in the marine hospital on the 18th of that month.”

“The vessel arrived at quarantine on the 8th day of July, from a cruise via. Charleston. Twenty-four days previous to her arrival she had been three days off the Moro-Castle, Havana, and she remained eight days at Charleston. Lieut. Coxe was taken ill with yellow fever, the day after her arrival at Charleston, and died on the first of July. Ten persons were sick with yellow fever on her arrival here. On the ninth of July there were thirteen cases of yellow fever, received from the *Enterprise* into the Marine hospital.

“On the 10th, midshipman Platt, and corporal Cooper, died, and Dr. Tilley’s life was despaired of. On the 11th, the number of cases had increased to twenty, and it was concluded to send the men on shore.”

I conclude this portion of the subject, by recording a few more very forcible cases, kindly furnished me by Doctors’ Westervelt and Van Hoevenbergh, the one the present, and the other, the former able Health Officers of this port. Dr. Van Hoevenbergh remarks: “The records of the New York Quarantine, furnish ample proofs of the importation of a malaria capable of producing yellow fever.

“Every year there is more or less yellow fever in the Quarantine Hospitals; many of the cases are sick on the arrival of the vessel, but

it is not uncommon for others to sicken while performing quarantine. Vessels have arrived from ports where yellow fever was known to have existed at the time of their departure, with all on board in good health, and after laying at Quarantine, ten or fifteen days, the disease has broken out among the crew, and persons from the shore, employed to discharge, and cleanse such vessels, have died with black vomit in the Hospital.

“ The following facts, are taken from the Marine Hospital Register: they have all occurred under my own observation, and I can vouch for their correctness.

“ The British brig of war, Buzzard, from the coast of Africa, arrived at the Quarantine Ground, Staten Island, about the middle of June, 1838. The crew were all in good health; but the coast was sickly, and they had lost a number of their men while there. The vessel was placed in quarantine for thirty days. On the 3rd of July, fifteen or twenty days from the time of her arrival, a man died on board after two days illness: he was reported to the health officer by Dr. Roberts, surgeon of the vessel, as having poisoned himself by swallowing tobacco, to avoid doing duty. On the following day, the vessel was visited, and one of the crew sent to the hospital. In ten days, thirteen men were admitted with yellow fever, viz: Michael Torbin, Crosby Lovett, Robert Haggerty, Thomas Lewis, Thomas Dyer, Thomas Marvin, Lieut. Walter Pollard, Lieut. Henry Seymour, Midshipman Floyd, Thomas Jones, John Coward, Martin Hugh and John Wilmot. Two of these died with black vomit, Crosby Lovett and Thomas Lewis; Lieut. Pollard, had the black vomit, but recovered. On the 14th of July, the crew were all landed, and remained on shore about six weeks, during which time, the vessel was thoroughly ventilated and cleansed. The Buzzard remained at the Quarantine Ground, until October, when she sailed for Europe.

“ The ship Gustave Edward, from Havre, arrived at St. Pierre, Martinique, in June: discharged cargo, and took in ballast from the water. The vessel remained in port eighteen days, and sailed for New York, July 9th, 1843. The captain procured a clean bill of health, and was assured by the physician who granted it, that the island was entirely free from yellow fever. The crew were all well at the time of departure: but on the second day out, the cook was attacked with fever, and died July 19th. The vessel arrived at the Quarantine July

23rd, and two men were sent to the Hospital with the yellow fever, both of whom recovered.

“The ship was quarantined thirty days ; while cleaning and white-washing the hold, three of the crew sickened and were sent to the hospital ; one died with the black vomit and the others were cured.”

“The following statement was given by Capt. John Spear, of the brig Growler, on arriving, under oath, at quarantine :

“The brig Growler, sailed from Boston May the 14th, bound to New-Orleans, and arrived June 12th. Immediately on the vessel’s arrival, four men were paid off and discharged : the remainder of the crew enjoyed good health while at New-Orleans : heard of no sickness among the shipping or in the city. The vessel took in a cargo of wheat, corn, pork, lard and oil, and sailed July 10th for New-York ; on the day of sailing, shipped four men in the place of those discharged ; all hands continued well until July 27th, when three of the men sickened with the usual symptoms of fever. On the 30th of July, not one of the men was fit for duty ; one of those who sickened on the 27th, died on the 30th, and another on the 31st. The vessel being leaky, and the pumps choaked, was run inside of the breakwater in the Delaware, August the 4th ; having had a survey, sailed thence for New-York, August 6th, and arrived August 9th, 1843.

“(Signed.)

JOHN SPEAR.”

“The following cases of yellow fever, were admitted into the Marine Hospital after her arrival, viz : Aug. 9th, John Brown, discharged Aug. 15th ; Aug. 13th, John Hart, discharged Aug. 25th ; Aug. 13th, Robert Havena, mate, discharged Sept. 1st ; Aug. 16th, John Spear, captain, died Aug. 21st.”

“Samuel Hopkins, captain of the lighter Daniel Barclay, while employed in lightering the cargo of the brig Growler, to the public store at quarantine, was attacked with yellow fever ; he was admitted into the Hospital, Aug. 28th, and died of black vomit on the 31st. Hopkins had, very imprudently and unnecessarily, gone into the hold of the brig, and remained there about twenty minutes.

“Dr. M. H. Van Dyke, assistant physician of the hospital, now sickened with yellow fever. He was attacked Aug. 28th. The doc-

tor had not been on board of any vessel from a sickly port ; he must have taken the disease, either from his close attendance on the numerous cases of yellow fever in the hospital, from their clothing, or from having been in the public store, where the cargoes of the infected vessels were ventilating. He recovered.

“ Dr. James Harcourt, while in the discharge of his duties as deputy health officer, was frequently on board of vessels from sickly ports. He was attacked with yellow fever Aug. 28th ; his case was well marked, and he convalesced slowly.

“ The bark *Eugenia*, twenty-six days from Vera Cruz, arrived at the quarantine ground, Aug. 10th, 1844. Two passengers, one of whom had been ill two or three days, were sent to the hospital with yellow fever. Pedro La Fengue, was discharged Aug. 21st, and Matthias Clasar, died on the 12th.

“ C. G. Wallace, captain of the lighter engaged in discharging the cargo of this vessel, went into the hold, and was admitted into the hospital Aug. 28th, and died Sept. 10th, a decided case of yellow fever.

“ The New-York pilot boat *Lafayette*, from New-York, arrived at Havana in June, 1839 ; remained there ten days, and returned in ballast. While in the port of Havana, and on the passage home, no sickness occurred on board ; but during the quarantine of thirty days, three persons sickened with yellow fever, who were engaged cleansing and ventilating the boat. Isaac Oxer, admitted in the hospital, June 29th, died July 3d, with black vomit ; John Oxer, admitted July the 8th, recovered ; Mr. Lockman, a pilot, who took charge of the boat, on its arrival, died with black vomit in the city of New-York.

“ Two of the Pilots, Messrs. Devoe and Alcock, were sick at their residences on Staten Island, as was understood, of the same disease.

TABLE

Compiled from the books of the Hospital, exhibiting the years of arrival; number of sickly vessels; number of sick after arrival; number of persons sickening having intercourse with sickly vessels; number of persons sickening having no intercourse with vessels, but employed at Quarantine Ground; total number of sick with Yellow Fever; number cured; number of deaths; and the ports from which the vessels arrived.

[illegible]

“From 1799 to 1806 there was received into the Marine Hospital of yellow fever, four hundred and thirty-four persons, of which number two hundred and twenty-two died.* The imperfect state of the register kept during that period does not enable us to state correctly the ports from which sickly vessels arrived, or the exposure of the persons who contracted the disease.

“From the register of 1821, it appears that three women belonging to the wash-house where the clothing of the sick were washed, sickened with yellow fever and died. This is the Sinclair family. The father, one of the barge-men in the health officer's boat, sickened and died of the same disease.

“P. Rhodes, a laborer on the public store wharf, also sickened and died of yellow fever the same season.

“The average annual number of patients received into the Marine Hospital quarantine ground for the past six years, is seven hundred and eighty-five.

“During the years 1811-12-13-14-31-36-37-40-41-42, no cases of yellow fever were received into the Marine Hospital quarantine; of which years, viz., 1811-12-13-14, commerce was interrupted through the non-intercourse and war.”

Dr. Westervelt says, in a letter dated November 17th, 1845 :

“My dear Doctor—In complying with your request, of the 12th instant, I regret that I can only give you such facts as my memory enables me to furnish, having unfortunately lost my notes relating to yellow fever, taken in 1823 and '24; years very rich in the most important and valuable statistics of that disease at the quarantine ground. I will not confine myself to the case of the U. S. brig Spark, but will give you some cases which came under my observation previously.

“In the summer of 1823, arrived at quarantine, brig Emeline from St. Jago de Cuba, having lost her mate with yellow fever on the homeward passage; she was permitted alongside the public store dock to discharge her cargo; consisting of coffee. After she was discharged, one of the men who had been hired from the shore to assist in dis-

*This large number is attributable to the cases received from the city during the yellow fevers of those years.

charging, went below with the crew, and helped them to wash down and sweep up the hold, being the only one of the hired men who had gone below in the vessel, in consequence of their fears, she being positively sickly. The second day after this man was attacked with fever, and died in three days with black vomit. This vessel was thoroughly cleansed, ventilated, *hove down*, and coppered at quarantine, and was, in every respect, prepared for a new voyage; a new crew, consisting of eight persons, were shipped, and came on board. In a few days several of them sickened, and some died in the quarantine hospital with black vomit.

“The ship *Diana* from Havana, also arrived at quarantine, during the season of 1823; two cases of sickness were sent to the hospital, and the vessel was quarantined thirty days, and was discharged, ventilated, and cleansed, and in every respect subjected to the full requirements of the *law*. The crew were discharged in good health, and the vessel remained in charge of the *máte*, as *ship-keeper*. A few days before the expiration of her quarantine, the mate obtained permission to take his wife on board, on condition that she remained until the quarantine of the vessel expired. The vessel then proceeded to Brooklyn, where the mate’s wife sickened, and died with yellow fever.

“The distinguished jurist, John Wells, Esq., then resident of Brooklyn, went on board this vessel, and in a short time, sickened and died of yellow fever. She was then remanded to the quarantine ground, and there remained, until frost made it safe for her to proceed to the city.

“The United States brig, *Spark*, arrived during the quarantine season of 1824, having been some time on the West India station, and coming last from Havana. Midshipman Clinton was buried at sea, two days previous, having died of fever, after a short illness. As in all cases of this kind, the great indisposition to give diseases their proper names prevailed, and consequently the true nature of Clinton’s disease was not suspected until two days after, when other cases occurred on board which unequivocally settled its character. Within a week, a number of cases of yellow fever were received in the quarantine hospital from this vessel. The crew, except sufficient to dismantle and cleanse the vessel, were landed, and in a few days new cases ceased to occur among them. But when those who had remained on board for the purpose of purifying her, &c., were relieved by men

who had been on shore several days, many of them sickened, and when they in their turn were relieved by others, again *they* sickened, and fresh cases continued to occur, whenever new men were sent on board, even after the vessel had been scuttled, and had several feet of water in her hold, and it did not cease until the water had actually become *ice*.

“In reference to the appearance of yellow fever on Staten-Island, in the neighborhood of the quarantine, I find my memory too imperfect to particularise. I only remember that several cases and some deaths occurred, that the disease was well marked in its character, and that it was doubtless caused by some communication with the cargo, or clothing, or bedding of the crew or passengers of some infected vessel, which had been brought on shore clandestinely, in violation of law, and therefore not to be divulged.”

Many other examples can be given of vessels conveying disease in other portions of the world ;* but the above ought to be sufficient to satisfy the most sceptical. In those I have transcribed, it will be again observed how difficult and uncertain it is to disinfect a vessel, and what caution must be observed to prevent unnecessary and unjustifiable destruction of life.

That cargoes and the baggage of seamen and passengers, communicate infection, I think beyond question. The proof I have already given, in the Sinclairs, Rhodes, a laborer on the public store wharf, and Doct. Van Dyke, the present assistant physician of the hospital. These instances will probably suffice ; although to multiply them can be easily accomplished. And why, I ask, should not goods and clothing become impregnated with the poison, as well as the interstices or cavities of vessels ? Is one not as accessible to receive it as the other, and will not the same effect follow its liberation ? To believe contrary, would be to establish a vacuum in nature, and to assert that miasma has the power to elect a special residence for itself and a peculiar concealment of its own—fallacies not requiring contradiction. From this general rule may be excepted, as sufficiently ventilated by transposition, dye woods, alum, chalk, coal, distilled, expressed and fermented liquors, drugs, and medicine, glass, stone and earthen ware, lignumvitæ, mahogany, marble and metallic substances, oils and paints, spices, tar and turpentine, turtle shell, segars, snuff, living turtle, mo-

* See essay on yellow fever by B. B. Strobel, M. D., late physician of the Charleston Marine hospital.—Charleston, 1840.

lasses and sugar in casks ; if in healthy vessels, prunes, tobacco, flour, rice, peas, pea-nuts, fruit in a sound state, salt, resin, honey, syrups, wax, and such other articles as may be sufficiently purified by washing with water or are not liable to retain infection, if the authority to make the exception shall be given to the health officer, by the board of health or the mayor and commissioners of health.

To designate with certainty the countries from which disease may be imported, is an impossibility. The present commerce of the world commingles nations with each other to the extremes of the earth, and the introduction of infectious diseases, where never before known to prevail, is as boundless as the destination of the myriads of craft, piloted by the énérgy, enterprize, and wisdom of mankind. Therefore, to regulate quarantine laws by the enumeration of localities, would be as useless as oppressive. They should be made to apply to *where diseases exist*, and the health officer should be *obligated by law* to ascertain the truth, under oath, from the captains and officers, and the passengers and crews, if necessary, of all vessels arriving from places at which fever is known or suspected to prevail, between the 1st of April, and the 1st of November, with power to use his *discretion*, subject to an appeal to the commissioners of health, and from them to the board of health. I italicise the word *discretion*, because, as in the affidavit of Captain Spear, sickly ports are not always known to commanders, and port physicians, occasionally give clean bills of health, as in the case of the Gustave Edward. Penalties of the severest character should be enacted for prevarication and falsehood.

Experience, it is true, has shown that ports within the northern tropic, and southern portions of the United States, are especially liable to the infliction of yellow fever, although many of them appear to be exempt at times, and others seem to escape altogether. It also emphatically teaches, that it occasionally prevails in northern and other ports to a fearful extent, entering the dwellings of the rich and the poor, and destroying alike amidst cleanliness and filth, hundreds and thousands of inhabitants. In my opinion the law should apply to all.

You ask, "Is yellow fever communicated by personal contact, or by an infected atmosphere, or by both?" If by contagion, is understood propagated from one person to another by contact, I unhesitatingly answer in the negative. Although I regard the experiments of drinking black vomit, sleeping with the sick, and wearing the shirts of

the dead, performed in places where hundreds are daily falling victims to the scourge, as simply establishing the absence of susceptibility or predisposition in persons to take it, even when exposed to the same cause that gave it to those from whom they were endeavoring to catch it, I have never known of an authentic case of any one giving it to another when removed out of the infected district, and I repeat, I do not believe in its possibility. That yellow fever may be taken by infection, or through the medium of an atmosphere containing the morbid poison, be it what it may, I reply unequivocally in the affirmative. Wherever it has appeared, observation fully corroborates the fact. Commencing at a single point, this secret agent extends with measured steps, until it seems to exhaust its virulence in the distance, proportionate to the quantity furnished from the source it is derived. Mysterious as it undoubtedly is, its slow and gradual approach, fortunately, gives timely warning of the danger, and allows thousands to avoid its grasp, by enabling them to mark, with almost unerring certainty, the limits of its power. No one can doubt its dissemination, through the atmosphere.

Let it be remembered that yellow fever has not appeared in this city for nearly a quarter of a century, and not since the present health laws have been rigidly enforced; therefore, let us not forget in our zeal for innovation and improvement, the good old maxim, "Let well enough alone." Admit they are, in a measure, restrictive to commerce and burdensome to the merchant; will any calm observer deny they are alike protective of his life and conducive to his interest? The pecuniary loss of a hundred years by the quarantine establishment, cannot equal the ruin and desolation of a single season of the pestilence. Who does not shudder at the memory of closed dwellings, the suspension of business, the shunned city, the quarantine abroad, and the sepulchres of hundreds, during the summer of 1822.

I scarcely allude, you will observe, to the yellow fever which prevailed in this city, at various periods; not because I think a disinterested review of the facts to be gathered from the archives of the board of health would be uninteresting or un instructive at the present day; but because I do not wish to enter into the controversies, probably now to be renewed, of former times, when many of the parties to it are dead, and because, I prefer confining myself, in a great degree, to the subject under immediate consideration, and the experienced

views of men, yearly familiar with the disease. It may not be amiss, however, to annex extracts from communications of Stephen Allen, mayor, and his associates in committee, and of Dr. Daniel D. Walters, of this city, in relation to the fevers of 1819, '21 and '22.

Mr. Allen says, "In the latter part of July, eighteen hundred and twenty-one, information was received by the board of health, that the yellow fever had appeared in Baltimore, and the necessary measures were accordingly adopted by quarantining the vessels from that port, and such other restrictions as were deemed proper, for the purpose of preventing its introduction into this city.

"On the third day of September a storm of uncommon violence occurred in this city and its neighborhood; the rain fell in torrents, which, together with the great rise of the tide, inundated all the low grounds and cellars on the North and East rivers. Measures were immediately adopted by the board of health, to have the water carried off, and the cellars ventilated and cleansed, in order that no injurious effects might be experienced by the inhabitants, or the health of the city impaired by this event. The effects of this storm on the surrounding country were very destructive, both on the land and on the water. At the quarantine establishment, Staten-Island, a number of vessels were driven on shore and stranded, and it became necessary to permit some of them to come up to the ship yards in the city, in order that they might repair damages, although their full term of quarantine had not expired.

"About this period, several cases of yellow fever occurred in the city, and created some alarm in the minds of the inhabitants. On the 8th of September, there were two cases reported to the board, one at 279 Front-street, and one at 80 Wall-street. The first case was that of James Van Allen, second mate of the ship Hebe. This ship had arrived from New-Orleans on the fourth of July, with the loss of three of her passengers by sickness, one on the 7th, and two on the 14th of June. Two of them were reported to the health officer, as having died of consumption, and one of diarrhœa. Mr. Van Allen had entered on board of this vessel two or three weeks before he sickened. He had been, for several days, engaged in the hold of the ship, stowing her cargo, and was so engaged until the third of September, the day on which he was taken ill. The second case was Seth Waite, who arrived in the Lucy Ann, from Havana, on the 20th of August.

The vessel was put under quarantine for thirty days, but owing to the damage she had received in the late gale, she was permitted to come up to the city to repair, and arrived at the ship yards, near Corlaer's Hook, on 7th of September. Waite complained of being sick while the vessel was coming up, and on her arrival, took board at 80 Wall-street. Both of these persons were sent to the Marine hospital, where they died.

"Two more cases of yellow fever were reported to the board of health, on the 27th of September; the first, Thomas C. Hawley, residing at fifty-eight Oak street, but doing business at eleven, west side James slip; and the second, David Collins, residing at thirty-six Banker-street, but worked as a blacksmith at two hundred and thirteen Water-street, adjoining in the rear, the place where Hawley did business. They both died on the fourth or fifth day of their illness.

"Shortly after the gale, which was the cause of so much damage to the vessels at quarantine, accounts were received from the health officer, that several cases of yellow fever had occurred among the men employed in, and about the stranded vessels: two or three persons sickened on board the Lucy Ann, after her return to the quarantine ground, and subsequently several others who were at work in repairing the public dock. A number of the inhabitants in the vicinity were also attacked with the disorder, although they resided several hundred yards from any of the stranded vessels. The Reverend Mr. Hardenburgh, who was on a visit to the island, contracted the disease, of which he sickened and died, at the village of Greenwich, the place of his residence. The disorder continued its ravages on the island, among those who were exposed to the infection, until the middle of October, when it ceased; the number of persons who took the disease was about forty, of whom twenty died.

"On the 8th of October, there was a case of yellow fever reported to the board of health, at 68 Eldridge-street; this was Henry S. W. Lee, a clerk in the store, forty-eight Water-street; he died on the same day he was reported; there were, also, several suspicious cases occurred in Stone-street, but the resident physician declared them the ordinary bilious fever of the climate, although several physicians persisted in the opinion that they were cases of yellow fever."

Again he says in a letter to Dr. Bayley: "It appears to me by no means improbable, that a large quantity of merchandize, brought im-

mediately from the holds of infected vessels, and landed in the vicinity of Rector-street, may have been the cause of the pestilence now prevailing in that part of the city ; and as it is clearly your opinion, that a sufficiency of contagious air, may be, by this means, introduced into the pure atmosphere of this city, so as to cause yellow fever, it follows of course, that this cause ought to be prevented, by prohibiting the introduction of any part of the cargo of an infected vessel, until it shall have been landed and properly ventilated.

“ If it is probable then, that infection may adhere to the rough boards of the packages constituting the cargoes of an infected vessel, and admitted, that it will continue in the holds of such vessels, after all the ordinary means have been used to expel it, may not some of this infection have been disseminated by the vessels alluded to in my letter of the third instant ?

“ That vessels will contain this infected air, after they have been white-washed and ventilated, has been sufficiently proved by the occurrences of the last year, in the instances of the *Lucy Ann*, *Ann Maria*, *Lyon*, and *L' Hirondelle* : and in one thousand eight hundred and nineteen, by the ship *Florentine*, on board of which some deaths by yellow fever occurred, after her discharge from quarantine, and in the present year, by the United States ship *Enterprise*. There have been a number of West India vessels at the wharves near Rector-street, but those which I suspect the most, are the ship *Shamrock*, and the schooner *Florida*,* alluded to in my letter of the third instant. The *Shamrock* left Matanzas on the first day of June last, and was at Havana, early in May preceding, both of which ports are now sickly, and may have been sickly at the time they left them, without being known to the Captains of the vessels ; for our own experience confirms the fact, that the yellow fever generally prevails for several weeks at a place, before it is officially announced. To the *Florida*, I attach much suspicion ; she is said to have left this place in November last for St. Mary's, thence to St. Augustine, and from thence to the Havana, then to Florida reef, and from there back to St. Mary's. So far the report made by the Captain. But I am led to believe, there is some omission by the Captain, in the detail of his report, and I strongly suspect, that this is the same schooner *Florida*, mentioned in a letter which Dr. Hicks, one of the assistants to the Board of Health,

* The ship *Shamrock* arrived on the 11th, and the schooner *Florida*, on the 21st of June. They were both put under quarantine for four days.

informs me he received from Mr. Walter Smith; a letter dated St. Augustine, some time last winter, stating that the yellow fever was introduced at that place by the schooner Florida, Captain Johnson, from Havana. The Shamrock was permitted by the commissioners to haul to the wharf at Rector-street, on the 25th June, and the Florida on the same day her quarantine expired, and they both continued there until their departure for sea. The question is, from which of these sources has the present sickness proceeded? Was it from the cargoes of infected vessels landed in the vicinity of Rector-street, or from the vessels alluded to above; or was it from the combination of both? That it proceeded from any local cause in that district of our city, appears to be totally out of the question, since none can be pointed out that has not an existence in almost any other part of the city. We have, doubtless, much to learn on this important subject, and for myself, I have no hesitation in acknowledging my lack of information. My only guides in these matters, are experience and observation, and from these I draw my conclusions.

“The sickness of eighteen hundred and nineteen could not be traced satisfactorily to a cause; neither could that of eighteen hundred and twenty-one, which caused the death of Van Allen, Collins, and Hawley; but they both occurred in the vicinity of the wharves, and although it could not be ascertained that any infected vessels had lain in the neighborhood of the place where those persons had sickened, yet there was not a doubt, indeed it proved on examination to be the fact, that several vessels from West India ports, not considered sickly, had been permitted to haul to the docks at the Old Slip, in eighteen hundred and nineteen, and at Roosevelt-street and James Slip, in eighteen hundred and twenty-one, and it is by no means improbable, that cargoes of infected vessels had been landed at both these places, as the practice then was, as now, to permit it to be brought to the city in lighters, immediately on its discharge from the vessel at the quarantine. There is, in my opinion, therefore, sufficient cause to fear the evil consequences of permitting, during the hot months, vessels under the following circumstances to come to the wharves of the city. That is to say: all vessels which at any time of the year, have been at those ports where the yellow fever annually prevails: or vessels that have been trading among the West India ports during the year, or during the winter months, and have not experienced the renovating influence of frost, to expel the infected atmosphere of that climate from their holds. Neither ought the cargoes of infected vessels to be land-

ed in the city until they shall be properly ventilated and cleansed : and if the provisions of the present law are not sufficient to authorize the aforesaid measures, it ought to be so amended as to meet the object proposed.

“It is admitted that much inconvenience would result to a portion of the mercantile community from the strict enforcement of the aforesaid measures, but it is believed that the loss of property, in the aggregate, will be much greater, if our citizens shall be compelled annually to flee from the pestilence, than would result from a system of strict quarantine duly observed, and rigidly enforced. I am well persuaded that it is the interest of this city, that every facility should be given to commerce, consistent with the health of the inhabitants ; and in order to mitigate the inconvenience to which the owners of vessels, trading to sickly or suspected ports, may be subjected by restrictive measures, and in order that the detention of the cargoes of infected vessels may be attended with the least possible disadvantage to the owners or consignees, I am of opinion, that store-houses ought to be erected at Staten Island, and at other places out of the city, for their reception at the public expense.”

Doctor Walters, in an able and searching letter to the board of health on the fever of 1822, attributing its origin to infected vessels or their cargoes in the vicinity of Rector-street, and “not to an old sink, a cist-pool, a rotten potatoe, or a putrid mouse,” remarks, on its simultaneous appearance at Lombardy and Cheapside-streets :

“When one half of a large city was so overspread with pestilence, that thousands of its inhabitants have been forced to fly to its more healthy parts for safety, and when the intercourse of necessity, of business, of friendship, of curiosity and of knavery, have each had their share of influence, it appears very idle to expect to trace every case which may occur elsewhere to the district first infected : each kind of intercourse here mentioned, occasionally, no doubt, has its victims. When, however, the communication has been carried on for the purposes of knavery, it is not very likely that those who have sickened from it, will be very communicative on the subject, unless the facts be wrung from them at the hour of death by the pangs of a guilty conscience. The particular cases of fever now to be noticed were caused by the intercourse of friendship or affection ; and, as we should expect in all like cases, we find in this, that the family who

suffered most held more communication with admitted infection, or with the infected district, than all the people of the seventh ward beside. The facts are these; on or about the 7th of August, Mr. Samuel Ward, who resided in Lumber street, within the infected part of the city, sickened with yellow fever, and was reported as such, by Dr. Perkins, to the board of health. Here he laid ten days very ill. During this time, his father's family, who lived at number twenty Cheapside-street, manifested on this occasion the most laudable anxiety for his welfare. He was not only visited daily, or oftener, by his father and mother, but his brother, a dumb boy, fifteen years of age, and a sister of thirteen, were constantly with him, as nurses or assistants. They slept at his house every night until the 17th, when it was thought that he had so far recovered as to enable him safely to leave Lumber-street, which he did, and went to his father's house, from whence he set out for the country next day. He brought with him from Lumber-street a quantity of clothing, which, however, was said to have been washed there; that is, washed in pestilence and dried in the poison of pestilence. About five days after he was gone, his brother and sister above mentioned, who had returned with him to their father's house, both sickened with fever. The sister's case was not very severe, but the brother was extremely ill; and 'as he could not speak, he exposed his sense of pain by laying his hand on his head, his back and stomach. On the fourth or fifth day of his disease, he was taken with profuse bleeding from the nose; after this, they both gradually recovered. Now, there is not in my mind, any manner of doubt, but that both these children had yellow fever. A few days after this, another daughter of the elder Mr. Ward was taken ill. Dr. Boyd was called in, who, no doubt, very correctly reported it yellow fever; and in a few days more, the elder Mr. Ward and another son were seized with the same fever, both of whom died. Mr. Ward's house and its immediate vicinity, may now be fairly considered a second infected district, located only about sixty or seventy feet from number four Lombardy street, where it appears, from the following affidavit and certificates, that another spark of the poison was set afloat.

No. 1. (Copy.)

"Jonathan Darrow, cartman, No. 5 Jefferson-street, in the city of New-York, being duly sworn, deposes and says:

"That on or about the second day of September, in the present year, he was requested by a young man, at or near the new market,

at the bottom of Catharine-street, in the city aforesaid, to take up and put on his cart, two chests, a bed, a hammock, and a bundle of clothes, tied up in a blanket. This young man had with him a sailor, as from his dress he appeared to be, who appeared to own a part of the things aforesaid. The young man first mentioned, after the articles were put on the cart, got on himself with them; he then requested this deponent to drive to No. 4 Lombardy-street, which request was complied with. While on the way thither, a conversation took place between this deponent and the said young man, in which the latter observed, 'a part of these things now on the cart, does not belong to me, but they did belong to a young man who lately died of yellow fever,' or words to that effect. And this deponent further says, that he drove his cart to the house No. 4 Lombardy-street, where he delivered that part of the goods, to wit, one chest, one bed, and the blanket containing the clothes, which the young man abovementioned had charge of, to an old woman and a young woman, who both received the goods, and placed them in the entry of the house No. 4 Lombardy-street. And this deponent further saith, that he then drove into Banker-street, about half way between Catharine and Market-streets, where he delivered the remaining part of the goods, to wit, one chest and hammock. And further this deponent saith not.

(Signed.)

JONATHAN DARROW.

Sworn before me this eighteenth }
day of December, 1822. }

(Signed.)

HARRIS SCOVAL,

Assistant Justice.

No. 2. (Copy.)

"We whose names are hereunto subscribed, hereby certify, that we saw, during the first week of September, in the present year, several times, a chest on which was placed a bundle of clothes, or bedding, as they appeared to be, tied up in a blanket, as we believe, standing in the entry of the house No. 4 in Lombardy-street.

"Given under our hands, the 18th day of December, 1822.

(Signed.)

WILLIAM H. MOTT,
FRANCIS SCHRODER,
ELEBRAD POLHAMUS.

No. 3. (A Copy.)

"I, Sarah Potter, residing at No. 23 Lombardy-street, hereby certify :

"That I was employed by the late Mrs. Cary, and the late Mrs. Snow, on Tuesday the third of September, in the present year, to wash some bedding and clothes, which I was informed had or did belong to some person who had been sick, and that I accordingly did wash one rose blanket, one bed-quilt, one pair socks, one handkerchief, one waistcoat, and three shirts, and that the shirts were very offensive, and very yellow. And that, while I was washing said clothes, the late George Washington Mott came near to the washing-tub, and inquired of me whether I took in washing.

"Given under my hand this 5th day of December, 1822.

(Signed.)

SARAH POTTER.

"On two occasions, it seems that infected clothing or bedding may be peculiarly mischievous, viz : when they are first opened in a warm atmosphere, after having been long closely packed up ; and again, when they are put into warm water, for the purpose of washing. The profuse vapor of warm water, seizes the matter of infection with the utmost avidity, and conveys it in its most active state, to the noses, mouths, and lungs of the by-standers. This fact was shown in a very striking manner ; for at the time the clothes referred to in document No. 3 were washing, George Washington Mott, having that day come to the city, was with Mrs. Cary, and Mrs. Snow, standing by the tub ; they all sickened with yellow fever on the same day, and died within a few hours of each other. The infection in Lombardy and Cheapside streets, reached to Catharine street ; thus taking possession of three principal avenues which lead to the wharves and the new market, from the upper part of the city ; and to this second infected district, no doubt, we may justly charge some cases of fever which occurred to the eastward and northward of it, and which were not at the time fairly traced ; a case in point was that of Mrs. D. Rogers. There were, however, three or four cases that fell under my observation, which were reported to the board of health as yellow fever, in the upper part of the city : about which I shall not speak, unless I was disposed to trace a drunken frolic, or something as unlike yellow fever as drunkenness, to the infected district."

- I find it was subsequently ascertained, on the authority of Captain George Mills, an assistant of the board of health, that Mr. Cary had been sick, and had arrived in the ship *Superior*, Captain Jocelyne, from New-Orleans, which vessel was quarantined for six days, and ordered to Brooklyn to discharge her cargo. Did not the clothes, &c. belong to him?

The introduction of Croton water into the city, doubtless gives great facilities in cleansing the streets, etc., and in keeping local air pure by the removal of nuisances; but its indiscriminate use, creating a continual damp atmosphere by constant evaporation from a heated surface, will probably be prejudicial, and more than counterbalance its beneficial effects, if yellow fever invades the city. Time has shown, that the only disinfecting agent to rely on with certainty is ice, or rather a temperature approaching thirty-two degrees of Fahrenheit's thermometer. I do not believe an ocean of water can wash the disease away.

You are aware the law excludes *all* vessels subject to quarantine of two days, "unless she shall have sailed from some port in the West Indies, or in America, south of Louisiana, and north of the equator, or from some port or place in the United States, south of Georgia, before the first day of June," from coming within prescribed limits, when released by the health officer, "*between the first day of June and the first day of September in the year of her arrival*," and consequently, they are driven for a harbor for the discharge and reception of cargo, *three months in the year*, to Brooklyn or some other place, much to the injury of the owners of store-houses in the city; greatly to the inconvenience and oppression of merchants; with serious pecuniary loss to consumers, and without much security to the city, from the near vicinity, and constant communication between New York and Brooklyn. You also doubtless know, all thirty day vessels are subject to like restrictions and objections, and that on both these points the statute is clear, imperative, and without reserve, unless to vessels "from healthy ports, wholly loaded with salt." That it originated from the difficulty of ascertaining with certainty the condition of vessels, as well as the health of the ports from which they sailed, and was framed at a time when this city was practically suffering under the terrible and afflicting visits of pestilence, by wise heads and pure hearts, I do not doubt; nevertheless, I think it will be perfectly safe, by enlarging the powers of the health officer; the requirement

of bills of health from American consuls and others abroad, and the enactment of severe penalties, fully proportionate to the consequences of the offence, to allow these vessels, under judicious restrictions, to proceed directly to our wharves on the expiration of quarantine. No one believes that vessels can bring yellow fever from places where it does not exist, and no one doubts thirty days to be ample time to ascertain if those from sickly ports, with the original crew well on board, communicates it to those engaged in cleansing ship, unloading and lightening cargo, and turning over and purifying ballast. In my opinion, two days is a salutary precautionary measure for the first; one month sufficient security for the other, and the first of October for sickly ships, either before or after arrival, the shortest probationary term.

With these views, I respectfully offer for the consideration of the committee, the following amendments to the existing law, which I recommend to be re-written and re-arranged.

That it be made *obligatory*, not discretionary, as it now is, for the health officer to place captains, mates, and others, if necessary, under oath, in all cases of suspected ports or vessels, from the 1st of April to the 1st of November in each year, and, that he have *discretionary* power in the premises, subject to appeal to the commissioners of health, and from them, to the board of health.

That severe penalties be inflicted for perjury, or any violation of law, by imprisonments, or fines, or both, and if the last, that power be given to bottom the vessel for its collection, whenever found in the port of New-York, and that the mayor and commissioners of health be authorized and directed to prosecute every offence.

That all two day vessels, when liberated from quarantine, be allowed to come *to the wharves of the city*, with the consent of the mayor and commissioners of health.

That vessels from sickly ports, on board of which *no sickness* of a malignant or infectious character has occurred while in said port or during the voyage, shall perform quarantine for thirty days, and shall discharge cargo, ventilate and cleanse. If, during that time, no sickness occurs to persons communicating with her, she shall, when discharged, be allowed to come *directly* to the wharves. But, *if said sickness has been on board, or appears while at quarantine, she shall*

not approach the wharves of the city within three hundred yards, until the 1st of October, and then in neither case but by permission of the mayor and commissioners of health.

That the commanders of all vessels, arriving between the first of April and the first of November, be required to produce a certificate of health of the place or places the vessel has been at during the voyage : if from a foreign port, from the American consul, if any, and authorities abroad, and if from ports in the United States, from the mayor or authorities of such place.

I also suggest the propriety, as well as the necessity, of the introduction of a section in the law, applicable to the introduction of small-pox from abroad, during the intermission of the quarantine laws. At present, vessels having on board this disease, are not liable to a visit from the health officer in winter, and are constantly importing the nucleus from which it spreads, not only rendering futile the efforts of the board of health to eradicate it, but destroying, as the weekly bills of mortality exhibit, a large number of persons in the interim. Fortunately vaccination is, at least, a partial preventive, otherwise this equal scourge to yellow fever, unarrested like it by change of weather, would prevail extensively and fatally, throughout the year.*

In conclusion, I present, for the reflection of the gentlemen representing the Legislature of the State, the expediency of extending the Marine Hospitals to the reception of *sick* emigrants, during the two years for which they are bonded, or after their arrival in this country. At present, they are only entitled to its benefits, if ill, on reaching this port, and not if taken sick, in the city, subsequent to that event. Thus the emigrant pays his money for the enjoyment of a privilege not one in hundreds require, while he is also compelled to indemnify the owners, consignees, or captains of vessels, in increased price of passage, for the risk they incur, and the expense for which they are liable, should the individual become chargeable to the city for support and medical advice. By it, I do not mean to convert the quarantine establishment into a *poor-house*. Neither do I mean that it is to be overloaded with *invalids and incurable cases of disease* ; but that it shall receive such as are, in the opinion of the commissioners of health, proper persons for admission in any hospital, *not connected*

* There have been 413 deaths by the small-pox, from the 1st Jan. 1845, to the 28th December, inclusive.

with charitable institutions. In framing the law, this must be carefully and explicitly regarded, otherwise it will lead to interminable altercation. The Legislature, you are aware, reduced the amount to a sum as nearly adequate to the disbursement as it was possible to ascertain, and for the purpose of carrying out the proposition, it will be necessary, in order to meet the increased expense, to establish a tax, adequate to the support of the institution.

In my opinion, and in the judgment of my colleagues, Doctors Van Hoevenberg and Harris, *one dollar* will be amply sufficient. It may be proper to add, that the hospitals at the quarantine ground, a map of which is annexed, are large enough for the purpose, unless there should be an unusual sickly year.

I have given your letter, to the extent of my ability, the reflection the importance of the subject requires, and if I have succeeded in elucidating it in the smallest degree, I shall be more than repaid for the labor.

That the committee may be more fortunate than I have been, will be the greatest gratification I can receive.

Very respectfully,

Your obed't serv't,

ALEX'R F. VACHÉ, M. D.

*"Resident Physician and Commissioner of Health,
of the City and County of New-York."*

TO DAVID E. WHEELER,
CALVERT COMSTOCK,
REUBEN H. HINE, Esqrs.

ANSWERS OF THOMAS HARRIS,

CHIEF OF THE BUREAU OF MEDICINE AND SURGERY OF THE NAVY DEPARTMENT OF THE UNITED STATES.

NAVY DEPARTMENT,
BUREAU OF MEDICINE AND SURGERY, }
October 14, 1845.

Your letter, dated the 17th ultimo, on the subject of the yellow fever, and the prevention of its introduction into the port of New-York, has been duly received.

It would afford me much pleasure, if my time were not so much occupied by my official labors, to assist you in your responsible duties, with such observations upon the subject under consideration, as opportunities have enabled me to make ; but, in the absence of such leisure, I must content myself with a very brief exposition of my views.

As the great object of quarantine regulations, should be the preservation of the public health, at the least possible detriment to the great interests of commerce, too much care cannot be bestowed in the framing of such a code of laws, as shall best answer both these ends. The establishment of laws of universal applicability, would be attended with much difficulty. Hence the necessity of leaving much to the discretion of a health officer, to whom is entrusted the duty of enforcing the quarantine.

Adopting the generally received opinion, that yellow fever is of miasmatic origin, and that it is not propagated by contagion, I can see no good reason why healthy passengers, arriving in a vessel aboard of which this fever prevails, should be subject to quarantine.

The vessel, however, should be detained at the quarantine ground, and compelled to undergo a thorough cleansing. The time of her detention, should be regulated by the extent and malignancy of her disease, by the date of her sailing from an infected port, and by the nature of her cargo.

I will briefly answer the interesting questions which you have submitted.

1. "Is the yellow fever of domestic origin in the port of New-York?"

In warm weather, the yellow fever may originate in the city of New-York, and no doubt has originated in that great metropolis.

2. "Is the yellow fever imported by sea into this port, and if so, at what seasons, and from what countries or ports, is it likely to be imported?"

It may be imported, by the vessels' being in an impure state, and under such circumstances, the greatest care should be observed, not to admit her into port until she is thoroughly cleansed.

3. "If imported, in what way is its importation most likely to occur — by vessels, cargoes or passengers, &c. &c. and from which source is there the most danger?"

This disease only occurs in vessels and cargoes. If the disease is produced by passengers, it must arise from their clothing.

4. "If a vessel arrive from a sickly port, without any sickness on board during the passage, and on inspection by the proper officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection — if not, how long after?"

I do not consider that there would be the slightest danger in admitting such a vessel into port, particularly after an absence of ten days.

5. "If a vessel arrive from any port in whatever latitude, such port being healthy at the time of the departure, without any sickness on board during the passage, and on inspection by the proper officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection?"

I cannot observe the slightest danger.

6. "Would the length of time occupied by the passage from port to port have any effect upon the answers to be given to the two last questions?"

In the event of their being ten days on the passage, I can see no danger. Should there be a longer time in the passage, without observing any symptom of the disease, there would be no cause of apprehension.

7. "If a vessel arrive from Europe, having had no infectious or contagious disease during the voyage, and the passengers on her arrival all healthy, is it prudent to allow the vessel with her passengers to come immediately to the city?"

I think it is perfectly prudent to allow her passengers and cargo to come to the city.

8. "In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit their cargoes to be brought to the city; and if so, ought there to be a discrimination as to the articles, and what articles of merchandize are most likely to communicate disease?"

In cases where it is imprudent to permit vessels to visit the city of New-York, in consequence of the yellow fever prevailing on board of her, it is certainly advisable to exclude her from the precincts of the city, until every symptom of the yellow fever ceases. At such a period, it would be also improper to admit the vessel or cargo to come into port. If the vessel is unhealthy, she should be unloaded at the quarantine grounds, and the vessel cleaned before she is brought into port.

9. "In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit the passengers immediately to enter the city?"

I can perceive no objections to permit healthy passengers to enter the city.

10. "Will fruits, vegetables, or animal matter, while in a vessel, *originate* the malignant yellow fever; and if so, from which is there the most danger?"

Neither fruits, vegetables, or animal matter, will originate the yellow fever, if such articles be kept in a sound state.

11. "Has the introduction of the Croton water rendered the city of New-York less liable to be visited by yellow fever; and will it prevent its spreading, should cases of it occur?"

I am of opinion that the introduction of the Croton water, will contribute greatly to the health of your city. It will promote the cleanliness and health of the city, but will not prove a perfect antidote to the introduction of yellow fever. Other means are necessary to contribute to this end.

12. "Is the malignant yellow fever the same as the Bulam fever on the coast of Africa, and does it originate there, and, if prevalent in any other place, is it modified by climate?"

Having never visited that part of the coast of Africa, in which the Bulam fever prevails, I can give no positive information in relation to this form of fever.

13. "Is the yellow fever communicated by personal contact, or by an infected atmosphere, or both?"

This disease is communicated by an infected atmosphere.

14. "What effect has the progress of medical science had upon the policy of enlightened governments in relation to Quarantine laws?"

The progress of medical science, has contributed greatly to the amelioration of the condition of the quarantine laws. Many enlightened governments have legislated to that end. It is hoped that the State of New-York will secure, by a well devised code of laws, similar benefits to the citizens of her great commercial city.

I have the honor to be,

Very respectfully,

THO. HARRIS,

Chief of the Bureau of Medicine and Surgery.

DAVID E. WHEELER, Esq.

No. 62 Wall-street, New-York.

ANSWERS OF P. S. TOWNSEND, M. D.

New-York, December 4th, 1845.

TO the Hon. DAVID E. WHEELER, CALVERT COMSTOCK and REUBEN H. HINE, Esquires, constituting a "committee appointed by the popular branch of the Legislature to examine the quarantine laws of the port of New-York, to take testimony in relation thereto, and to report the facts and such alterations in the said laws, as in their opinion shall be expedient, at the next session of the Legislature."

GENTLEMEN :

I regret that pressing professional engagements have hitherto prevented my replying to your published circular letter of July 29th, 1845, addressed to me, and containing a number of questions in relation to the duties assigned to you by the resolution of the Honorable the Assembly of this State, of which the above is an extract.

I now proceed at once to present to you the answers, which some considerable experience on the subject of yellow fever, and quarantine laws, since the year 1819, both in this city and in Havana (Cuba), and in the Bahama Islands and other places in the West Indies, as well as at Charleston, South Carolina, and in Europe, have been deemed by me suitable to submit to your consideration, as the deliberate result of my convictions on these matters, so important to the public welfare.

I shall reply as briefly as possible, reserving the facts, data, references and extended proofs and arguments in support of my answers to another communication, in the event of my receiving from you a request that I would enter into such details.

QUESTION I. *Is the yellow fever of domestic origin at the port of New-York?*

ANSWER. *Never*: nor in any latitude, at or north of a degree in which ice is formed; in other words, where *congelation* or a *freezing temperature* exists at any season of the year.

Because :

1. It is essentially an intra-tropical fever, *sui generis*, and of a specific and idiopathic character and origin, different from all other diseases and fevers whatever; whether such other diseases or fevers be intermittent, remittent, bilious remittent, malignant bilious remittent, miasmatic, continued, synochal, inflammatory, ardent, typhoid or otherwise.

2. Because it requires for its first production and origin, *two elements* which cannot co-exist by nature either in extra-tropical or intra-tropical countries, but which may co-exist *incidentally* in intra-tropical countries *only*, to wit: an extra-tropical or native northern constitution (i. e. the constitution of a person native of and resident in the temperate zone) and a temporary intra-tropical position or residence; that is a person of northern constitution from without the tropics, suddenly exposed to and brought into actual contact with the steadily continued heat of the torrid zone.

3. Because when so *first* produced within the tropics or torrid zone, *ab origine* or *ab ovo*, it requires for its *propagation* or reproduction *there* or *without the tropics*, that the case or cases so produced, whether singly or collectively, successively or simultaneously, should be placed in communication (if it is within the tropics), with *other recently-arrived* subjects of *northern* constitution, congregated together in confined apartments, whether on ship-board, in hospitals, garrisons or otherwise; and (if without the tropics), with the indispensable condition also of an elevated tropical temperature for a certain period of time.

4. Because, moreover, when a *solitary* case or *scattered cases*, are thus *primarily* and sporadically generated as above mentioned, for example, in a northern man or northern men at Havana, *it* or *they* are more apt to propagate or transmit the *contagious virus* which emanates from their bodies, to others in health, in close proximity to them,

when the parties in question are placed under the circumstances of confined air and crowding mentioned, especially in vessels with northern crews, *on their voyage from tropical into northern latitudes*, during the heat of summer for example ; by reason* that the atmosphere below-decks of such vessels is more confined in consequence of shutting down the hatches and companion way immediately upon their arriving, as they do in a few days after their departure, into the cooler latitudes of the north, and thus excluding ventilation.

5. Yellow fever is *not of domestic origin or indigenous growth here or elsewhere without the tropics* ; because, whatever may be the degree of summer heat that may be prevailing in extra-tropical latitudes, as at New-Orleans, Pensacola, St. Marks, Tallahassee, St. Augustine, Savannah, Charleston, Edenton, Wilmington, Norfolk, Baltimore, Philadelphia, New London, Newport, Boston, &c , &c. ; and though it be acting as it does in such places throughout the extent of our coast within the temperate zone, upon *northern* men and *northern* constitutions, chiefly ; it is unaccompanied with those concurrent circumstances, meteorological or otherwise, existing in an *intra-tropical* climate, and wanting especially in that *peculiar* character which distinguishes a tropical temperature ; viz, a *steadily continued* but *not extremely elevated* range of the thermometer, *varying but two or three degrees night or day for weeks* in July and August, as from 84 to 86° Fahrenheit, which *conditions* are ABSOLUTELY ESSENTIAL for the *primitive* production or *aboriginal* generation of yellow fever or black vomit, and which therefore can *only* take place in tropical climates, and produce their effect in the first place only upon the *northern* constitutions in question.

6. Because, also, though such heat or elevation of ranges of temperature as belong to our climate, may in marshy or paludal situations in any part of the United States, all of which (Texas included) is situated *without* the tropics, impart a malignant or typhoid character to a remittent or a bilious remittent fever, whether on the sea coast or in the interior, on our river bottoms or lake shores, or on or in the neighborhood of prairies, savannahs, hammocks, everglades, bayous, lagoons, swamps, morasses, &c. ; such remittent or bilious remittent, or congestive or malignant remittent, by whatever epithet it may be termed, is eminently and pathognomically contra-distinguished by a broad and unerring line of demarkation, both in its origin and symptoms, from every grade or form of yellow fever.

7. Inasmuch, also, as it is a fact *now* placed beyond all dispute, that where marsh or paludal districts exist, and especially in those tracts of country where the rankest decomposition of vegetable and vegeto-animal matters most abounds, and completely saturates the air with its exhalations, as for example directly upon the equator, at the mouths and on the margins of the great rivers and estuaries upon the coasts of America, Africa and Asia (as the Oronoko, Amazon, Gambia, Niger, Indus, Ganges, &c.), YELLOW FEVER *rarely* or never exists, because of the utter incompatibility and in fact perfect antagonism of marsh or paludal exhalations, with those causes which are indispensable (as above stated) for the production or propagation of yellow fever. And that consequently every form of remittent or intermittent, bilious remittent, bilious malignant or bilious malignant remittent, or congestive remittent fever (African, Batavian, &c.), is ascertained to be of a *type* both as to its cause and the order of its phenomena, and the organs affected and the appearances on dissection after death, *totally unlike and at variance with*, in fact in complete and diametrical antagonism to yellow fever or black vomit; those last mentioned types of remittent fever as contrasted with the type of yellow fever, actually presenting an assemblage and succession of morbid phenomena or symptoms in *reverse order* to each other.

8. To which it may be added that the most malignant, fatal and unmanageable forms of the paludal or remittent types of fever, are found among the NATIVES of the TROPICS, and that *northern men* in the tropics on their first arrival there, are often found to be *far less predisposed* to such paludal or miasmatic or marsh fevers, than the *natives themselves*; while on the contrary the natives and residents of the tropics are rarely or never attacked with yellow fever.

9. Also, this last disease (yellow fever) so peculiar to northern men in the tropics, is most rife and most frequent on such *dry, sandy* and *salubrious* situations as are *most free* from all connection or contamination with paludal or marsh exhalations, as for example, Havana, Curracoa, Vera Cruz, &c.

10. So also where yellow fever has been propagated or reproduced as above described, from cases brought from the tropics into cooler or northern and *extra-tropical* latitudes, *marshy situations* here also have been rather a *protection* against, than a means of accelerating, the spread of yellow fever. While, on the contrary, it has proved

most mortal where such marshy regions *did not exist*, as at Cadiz, Gibraltar, Malaga, at several villages *near the summit of mountains* on the coast of Spain and other parts of Europe, also at New-York, Newport, Philadelphia, Charleston, Savannah, Baltimore, Mobile, Pensacola, St. Augustine, &c.; all of which are celebrated for the salubrious character of the topographical or geological formations (*viz.* primitive or calcareous rock, gravel, sand or debris of shells, &c.), which distinguish these localities.

QUESTION II. *Is the yellow fever imported by sea into this port ; and if so, at what seasons and from what countries or ports is it likely to be imported ?*

ANSWER. 1. The previous answer embraces the greater part of the reply which it is my intention to make to this question.

2. It is clear that the more rapid or short the communication between a yellow fever or tropical port, and an extra-tropical port (and which of course is generally by sea), and the more extended the commerce of *northern* men between such ports, and the fewer the restrictions placed upon such intercourse, the more frequent will be the generation of yellow fever in the intra-tropical ports in question, and the more extensive its propagation or reproduction by importation into extra-tropical latitudes.

The same *law*, as to proximity and multiplied relations of intercourse, holds good between interior towns and sea ports, without the tropics, after yellow fever has been once introduced from within the tropics. This was particularly exemplified a few years since in the destructive ravages of yellow fever at *Augusta*, in Georgia, into which place it was introduced from Charleston, South Carolina, by the incessant railroad communication between those cities, *after* it had been *first imported* into Charleston from the West Indies. So of all the towns on the Mississippi and its tributaries, in their daily, constant and rapid intercourse by *steam* with the great *forwarding depot of imported yellow fever* at New Orleans, a result scarcely known before the year 1817, when steamboats had, it may be said, not yet begun to ply on those waters.

Even at the healthy plantations on the *delta* of the Mississippi and its waters, immediately *below* or above New Orleans, as at Opelousas, Attakapas, Alexandria, Donaldsonville, Natchez, Memphis, &c., the

introduction of the disease into such towns from New Orleans, *now*, for the reason stated, occurs almost yearly.

The whole of that vast and fertile region known as the valley of the Mississippi, and containing a population of over *eight millions* of souls, are thus annually exposed to this deadly scourge, and their shipping to severe quarantine regulations in Europe and other countries *abroad*, from their laboring under the false imputation of *engendering* yellow fever, because at New Orleans, the key port of the Mississippi, it is thought upon the whole, most advantageous in a mercantile point of view to endure this pestilence and incur this reproach, by spreading wide the gates of the great southern metropolis to an unconditional, indiscriminate and unrestricted commerce with Havana and every other yellow fever port.

The source of all which mischief lies in the fatal errors propagated by medical theorists obstinately adhering to their preconceived dogmas, and exercising a pernicious influence upon municipal and State authorities.

3. It is my firm belief that were it possible to transplant suddenly into New Orleans, which is in latitude $29^{\circ} 31'$, a colony of persons of the most highly developed northern constitution, as for example, from Nova Scotia, or even *Greenland* or *Lapland*, *yellow fever* could not by any possibility be *generated* or produced in their systems by the influence of domestic causes there, to wit, the climate or the alluvial mud of the rivers, &c., nor could they ever have that disease there, if the shipping from Havana and the other yellow fever ports, were totally interdicted from communication with the said port of New Orleans.

The latter condition, i. e. the admission of shipping from tropical yellow fever ports must *precede*; and hence the disease is *always prevailing for weeks among the crews and laborers about such shipping at the wharf*, before it reaches to the Irish, German or other recently arrived northern emigrants and residents, living in the city itself; and occurring then only in consequence of such residents having had more or less direct communication with such infected shipping, whereby the contagious imported virus becomes ultimately reproduced to such extent and in such intensity by this multiplication of cases, that it rapidly spreads among the whole population, *native*

as well as northern, and thus assumes the character of an epidemic.*

Does this look like a *native indigenous* disease engendered in the mud or marshes of the Mississippi, or in the streets of New Orleans ? If so, it is very singular that with a paludal and *terrestrial* and miasmatic remittent parentage, it should evince such a *peculiar predilection* for *shipping* from Havana and the yellow fever ports !

4. You will readily conceive the season in which yellow fever will be most liable to be imported into New York or any other extra-tropical port. It must be that in which the temperature of our atmosphere approximates nearest in character to that of the tropics, to wit, in *summer*. Yellow fever will then be *imported*, and so may *tropical plants* be brought hither, and vegetate and flourish in the open air during the continuance of such temperature ; but you cannot *produce* such disease or such plants *in our soil, from the seed*, any more than you can raise pine apples in the Park.

5. It will be most likely to be propagated here, if there should be collected in our city, in narrow streets and small confined houses, for example, large numbers of persons of constitutions *more northern* than those of our own inhabitants, as recently arrived German, Swedish, Scotch, Irish, Canadian, and other emigrants of that description. And the same rule applies to our cities south. In those cities a native born and resident New-Yorker, for example, is, upon arriving at Charleston, New Orleans, &c , more liable to take the yellow fever introduced and existing there, than a native and resident of Charleston, New Orleans, &c. The farther or *more remote* the place of our *nativity* or *continued permanent residence* is from the tropics, the greater our *constitutional* predisposition or susceptibility to yellow fever. And vice versa, the natives or permanent residents of different cities, towns, &c., on our coast or inland, enjoy a greater *immunity* from the disease and are less *constitutionally* predisposed to receive or propagate its virus, in a direct ratio to the *nearer* proximity of such cities, ports or places of their permanent residence or birth place to equatorial and intra-tropical latitudes.

* The last destructive prevalence of yellow fever at *Mobile*, situated very nearly on the same parallel of latitude as New Orleans, afforded too many melancholy proofs that *southern native* acclimated residents of that city, were not exempt from the deadly influence of the imported West India disease.

6. The countries or ports from which it is most likely to be imported, is explained above ; that is, from intra-tropical countries, latitudes or ports, nearest to our city, and having the most commerce with northern shipping, with crews, &c. of northern men, i. e. as we have before said, with men of constitutions or organizations possessing the characters peculiar to those born or permanently residing in the cooler latitudes of the temperate zone, whether in the southern or northern hemisphere of the globe. Thus, the native of the extreme southern portions of Chili will as readily take the yellow fever at Acapulco (lat. 23°), on the intra-tropical coast of the Pacific, as the native of Labrador will fall an easy victim to it at Vera Cruz or Havana, in the same latitude in the Atlantic ocean.

7. To confine our illustrations, however, at present, to our own hemisphere,—the yellow fever when once introduced or imported from intra-tropical latitudes into such places as New Orleans, Mobile, Charleston, New-York, Newport, Boston, &c., may again be re-imported or *re-propagated* from thence ; i. e. from one of those ports to another or several of them, especially to places upon or in their immediate vicinity upon the sea board, admitting of easy access by shipping.

There will, however, be greater danger of its re-propagation in this manner into our city from *southern* sea ports than from places on our coast at a higher latitude than our own city ; because, for the reasons already stated, the disease acquires among *northern men* from high northern latitudes, and accidentally placed either within or immediately near the tropics, a greater degree of malignity, than in places remote from and to the north of those regions ; this law, as I have said, being also governed (as far as my observations go), by the measure of proximity to the tropical or equatorial regions, the *only* original *foci* of yellow fever.

But the disease is also far more liable to be propagated *de novo* as well as to be reproduced from cases that have been *generated* (as above explained) *within* the tropics, than to be re-propagated from one extra-tropical sea port into which it has been introduced (from the West Indies for example), to another extra-tropical port north or south. Because the yellow fever or black vomit *primarily* engendered in the persons of *northern men* within the tropics (from the causes explained), is naturally of a still more malignant character in this its *original*

and legitimate type than when *regerminated*, as it were by *transplantation* into the north; in the same manner as the genuine cow-pock, for example, is far more *virulent* and gives rise to more acute and dangerous symptoms, than that milder form which has been once or oftener transmitted through the human constitution.

Nevertheless, it is to be borne in mind, that whether the source of propagation be the *original* or the *transmitted* virus, that this virus, in either instance, after a certain multiplication and concentration of cases, acquires an equal measure and amount of force and intensity with the original type mentioned. It is after such accumulation of power, when from motives of policy and fear of alarm, the first few cases generated from the imported virus at our wharves, have not been removed from the midst of our population, that the *contagious* principle of the disease is brought into active coöperation with the primary cause, and that this superadded source of mischief, increasing in virulence at every step of its progress, soon gives to it the character of an epidemic.

8. It is easy to understand also, that upon the supposition that yellow fever is (as it frequently has been) generated on board of English or American ships, for example, with northern crews, in intra-tropical situations, *either in the vicinity* of, or out at sea and distant from, the coast of Africa, it will in the first place be more *apt to be thus generated in European vessels* engaged in such commerce than on our own vessels. Because the voyage from European ports, as for example, from England, France, &c., to such equatorial places on the African coast, is *infinitely shorter and more direct* than from our country, so that the solar tropical heat acts immediately and suddenly, and with all its intensity on such European crews, before they have time to become in the least degree acclimated.

9. While, on the other hand, yellow fever is for these reasons, less apt to be generated among the crews of our vessels arriving upon the coast of Africa from the United States, because such crews, by the length of the voyage, and the fact of *that voyage being nearly wholly made upon the tropical parallels*, have acquired a partial degree of acclimatization against or immunity from an attack of yellow fever. *A fortiori* such crews are to the same degree *more susceptible* to the action of the deadly paludal or miasmatic exhalations met with upon the African coast, than they are to yellow fever, and consequently

frequently return home under the influence of the obstinate and often fatal forms of *protracted bilious African remittents* so common on that coast ; but *never* in any instance to my knowledge has a *case of yellow fever* been brought home to any of our sea ports from the African or any other *trans-Atlantic* coast, by the crews of the vessels in question.

Therefore quarantine restrictions ought to be exercised with much discretion and leniency towards *all* such vessels, as compared with the rigid *surveillance* that should always be directed in our summer months upon all intra-tropical vessels from West India or other *equatorial* regions, upon the coast of our own continent ; always, however, with reference to the *length* of the voyage from such places, provided that it has been satisfactorily ascertained (as, for example, in vessels from *Demarara, &c.*), that there has been no occurrence of yellow fever on board during the voyage or previous to the departure of such vessel.

10. *A fortiori*, also, or with greater reason, vessels with northern crews, going directly (and without stopping at any intermediate port), from Europe or America into the *Asiatic or Indian Ocean*, are *still far less liable* to have yellow fever ; because, before reaching those distant seas, the crews are already in a great measure, *gradually* acclimated by the length of the voyage, to the equatorial latitudes of those Asiatic regions, inasmuch as the greater portion of the long voyage in these cases, is made almost altogether within the parallels of the tropics. Consequently it is a matter of *great doubt*, if cases of yellow fever were ever generated on board such vessels under such circumstances. But not a year passes, that their crews do not become liable to the deadly and protracting forms of remittent fever, Asiatic cholera, dysentery, &c., at Bombay, Calcutta, Batavia, Canton, Manilla, Macao, &c.

11. For the same reasons, little or no danger can ever be apprehended from such vessels on their return voyages from the East Indies, and few if any quarantine restrictions have ever been found requisite for such vessels, except under peculiar circumstances and not for yellow fever : for they have *never* brought it here from thence.

What may ultimately result from the great curtailment of voyages to the East Indies and China seas, by the rapidity of improved steam navigation, cannot now be anticipated. The establishment of the more

rapid over-land communications between northern Europe and the East, will, however, doubtless for a long time supersede or defer the necessity of accomplishing such rapid intercourse upon the sea by means of steamships.

QUESTION III. *If imported, in what way is its importation most likely to occur—by vessels, cargoes or passengers, &c., &c., and from which source is there the most danger?*

ANSWER. 1. The first branch of this question is nearly wholly answered by what precedes. It must be clear to every one that the *importation* of yellow fever must take place *through vessels or shipping with northern crews* from *proximate* intra-tropical to extra-tropical sea ports. Because, were it possible for the same inter-communication to take place *continuously* upon land, the time necessary to be consumed in the transit, would in almost every instance disperse, dissipate and render *innocuous*, the *fugacious*, gaseous vehicle, in which the *virus*, or specific germ or poison of yellow fever is now ascertained to be conveyed, i. e. the medium by which it is diffused through the air, or in other words the *aeriform* material or *solvent* with which it is incorporated, until *frost* dissolves or divorces the union.

2. An exception to this remark, would be, where such gaseous, contagious virus of yellow fever, which had been exhaled from the lungs, skin, &c., of persons sick of the disease (whether such persons had died or not) has become as it were *concrete* or far more *concentrated* and virulent, by being *imprisoned* and confined, or shut or pent up or packed down, as so frequently happens in all *porous* substances or *fomites* (as they are termed), which also, in themselves, have a peculiar attractive power for absorbing and retaining it, as is the case with the *body or bed linen* of such persons which has become saturated with this virus thus concentrated, and which has been stowed away, in trunks, chests, bedding, &c.

Every one is familiar in our country with the cases of *vomito* or yellow fever produced by such imported fomites from the West Indies, from the opening or unpacking of such materials, causing or reproducing the disease in its most malignant form in such as are exposed to them, among our native citizens or residents at our sea ports and villages on the coast, and even among country people at our mere landing places, high up on our rivers, where such chests, effects, &c.,

have been brought on shore and opened, to be washed or otherwise disposed of (as on the Mississippi, Delaware, Hudson, Connecticut, &c.).

Therefore yellow fever may in this way be conveyed by land as well as by sea.

3. From such sources, therefore, the most danger is always to be apprehended; because the virus of yellow fever under such compacted form of *fomites*, is always found from its intimate and extensive absorption by, and close union with, and extensive affinity for, such fomites or porous substances, to be infinitely more concentrated and virulent, than when transmitted in its more diluted form through the open air from the breath and skin of a living case of the disease, to a person in health exposed to such case. But where, under the latter circumstances, a number of persons have fallen sick in the same house or neighborhood, the *dose of poison* thus accumulated, becomes equally virulent and equally capable of reproducing the disease in its most fatal form. And it is, or has been, as we have already remarked, from the neglect to prevent this accumulation of cases, on the first introduction or importation of the virus, that the yellow fever has almost in every instance (through fear of the public authorities to create alarm), been allowed to obtain a *foothold* in our sea ports and thus, under favoring circumstances of atmospheric heat and a crowded population, been enabled to repropagate itself through the medium of the combustible vehicle or materials thus prepared for it, and to become in this manner an epidemic scourge when it is too late to arrest its progress.

From what is said above, a greater degree of vigilance and more efficient protective measures are required, against the *pucked-up importations* of the virus in fomites; because it may so happen that the vessels in which such effects are found, may at the time of their arrival, have on board no actual cases of sickness from yellow fever.

4. This naturally conducts me to the last branch of your inquiry, in relation to cargoes more particularly; for in relation to crews and passengers, the question will find its answer in what precedes.

Cargoes are never dangerous, and never become infected, and can never be in themselves (per se) a source of yellow fever; no matter what they are composed of or in what state of alteration, damage,

degenerescence, putrefaction or putridity they may be ; whether they consist of fruits, hides, jerked beef, cotton, coffee or any other matters, vegetable or animal ; *unless* such cargoes, or the *porous substances* and envelopes *more particularly* in which they are contained, or where they are stewed, as bags, boxes, hogsheads, casks, limbers of the hold and cabin, the births, bedding, &c., &c., have *previously imbibed* the *contagious virus* of yellow fever from the bodies of those sick or dead of that disease in their immediate vicinity, whether at yellow fever ports or during the voyage of the vessels from thence.

5. Therefore, for it is unnecessary here to recapitulate daily proofs of the truth of the above propositions at our own port and at New Orleans, &c., every summer ; *the whole subject of quarantine restrictions*, as they relate to such cargoes of animal or vegetable matters, whether decayed or sound, and to the mud of our docks, new-made grounds, wharves undergoing repairs or construction, the contents of our sewers, streets, privies, burying grounds, slaughter houses, glue and starch factories, &c., &c., *demand immediate revision and reformation.*

6. So far I repeat as relates to decayed or putrid cargoes, of fruits, coffee, hides, &c., &c., come from where they may, or at whatever season of the year, they NEVER can of themselves, under any state of the atmosphere, produce or generate *yellow fever* ; nor any other disease, except perhaps *in some rare exceptions*, and in crowded and confined apartments, cellars, &c., the type of remittents, bilious remittents, intermittents, dysenteries, typhus, &c. ; inasmuch, as animal and vegetable putrefaction or decomposition, especially where vegetable *malaria* is combined with it, may produce such forms of fever any where in any part of our country, whether in the interior or upon the sea coast, and at any season of the year, in winter and spring as well as in the summer and autumn ; such forms of disease also being then generated in the system, not so much from any morbid virus elaborated without from such decompositions, as from the fact of the tone of the vital energies being greatly impaired, lowered or prostrated from breathing an atmosphere de-vitalized of its healthy properties by such emanations.

7. The embarrassing and vexatious provisions, laws, ordinances, &c., respecting such matters, so far as they are based upon the sup-

position that *yellow fever* or *black vomit*, can be produced from or generated by such causes, are not only utterly absurd but grievously oppressive. It is to the *crews and passengers of northern constitutions from yellow fever ports*, that you must look as the sources of the foreign pestilence, and against these direct all your precautions. Not but that the most rigid regulations, should be prescribed both on ship board and on shore, in our docks and slips, as well as in relation to our streets, sewers, &c., to preserve the utmost degree of cleanliness. For we know, as I have said, what are the class of diseases which the emanations of such filth may possibly indirectly engender, or rather predispose to, by their depressing influence upon the vital energies of the system.

8. Thus, therefore, all such sources of animal and vegetable putrefaction diffused through the air must have a deteriorating or depressing influence upon the public health any where, and thus indirectly favor in the way I have explained the propagation of any febrile form of disease introduced into such atmosphere; particularly in hot weather, when the exhalations from such matters are most abundant. Because, as I have remarked, and now repeat, the more we inspire or breathe in of such impure de-oxygenated atmosphere, the less proportion do we consequently receive of the quantum of pure air necessary to support life and sustain health, and consequently the greater is the predisposition of the system to receive any morbid virus whatever, and the less its power to resist its effects.

9. It is, however, to be remarked in reference to such exhalations, that so far as they are composed or consist of those concentrated miasmatic effluvia emitted upon so gigantic a scale from the accumulated masses of rank vegetation in impenetrable forests and low sunken marshes and swamps, &c., as at the mouths of the great equatorial rivers and estuaries of Asia, Africa and America, already mentioned; they not only *cannot generate yellow fever* or the *black vomit*, but *on the contrary* seem to possess under this form of vegetable or *paludal malaria*, in its most malignant condition of intensity or virulence, the *protecting power of excluding yellow fever*, by creating *another and totally different type of disease*, namely, one which does not emanate from the human body or from *human effluvia*, but from the atmosphere which is loaded with these vegetable and vegeto-animal impregnations.

10. The diseases which such *malarious* sources produce, and to which yellow fever has been by some falsely imputed, are, as already stated, *infectious, and not contagious* nor susceptible of propagation, reproduction or transmission through the human body or otherwise. For they come only and exclusively *from the earth or atmosphere without*, which alone is the source of, or charged with such effluvia of paludal decomposition and debris: while *yellow fever* is a *contagious* disease, and must be *generated first within the living human body, and can only be propagated and reproduced* by a specific animal germ, poison or virus, secreted in the system of those laboring under this disease, and thus given off and transmitted from their persons to others in health. And if, as we have explained above, other matters without, as the cargoes and holds and cabins of vessels, and the air of houses, garrisons, prisons, streets, &c., &c., become imbued with yellow fever virus, and are thus constituted the *foci* of its reproduction, such *virus must have been previously derived* from the emanations of the living human body or bodies laboring under yellow fever within such places or localities.

11. This is the *sine qua non* and the great distinction to be constantly kept in view, in the great *diagnostic* landmarks between the two great types of disease in question, human or paludal, and this must be your *guide and basis in framing quarantine laws*.

12. All those oppressive and odious laws, therefore, in our quarantine code, or statutes thereto relating, which for the last forty years nearly have been forced upon us, out of *complaisance* to the importunities of those who maintained the untenable doctrine, that yellow fever was nothing more than an *ordinary indigenous bilious remittent, or bilio-typhous remittent, or malignant typhoid bilious congestive remittent*, of our low, swampy, marshy grounds, *every where* and at *every season*, and *throughout every latitude and locality of our country*, must be totally abrogated *quo ad hoc*,—that is, in regard to all damaged, decayed or putrid cargoes, bilge water, refuse, offals, &c., in ships or other vessels, arriving here from any port or latitude whatever, whether during the summer or any other season.

13. Provided, that, as a necessary precaution from the difficulty, if not impossibility of arriving at the truth, as to what has happened, or who have fallen sick or died during the voyage of all vessels coming from *intra-tropical yellow fever* ports, it is absolutely necessary that

all such vessels, whether bringing out cargoes or not, but *especially when without cargoes and in ballast* and apparently *clean*, and with *numerous crews and passengers*, should always, in every instance, whether yellow fever prevailed or not at such ports at the time of their departure, be subjected to a provisional detention or precautionary *surveillance* at quarantine, and to thorough and repeated cleansings, before being permitted to come to any part of the city.

We say, especially *vessels without cargoes and apparently clean* and having *ballast* only, because, singular as it may at first sight appear, it has nevertheless been found by experience to be true, that where yellow fever has occurred in such vessels, the virus of the disease, from having had an opportunity of becoming diffused through the atmosphere below decks, fastens itself or clings and becomes adherent to the timbers and limbers of the vessel in such manner as to resist the most persevering efforts at disinfection, communicating successively (as has repeatedly happened at our quarantine ground), the black vomit, i. e. the yellow fever, to the different gangs of laborers sent from on shore to perform these duties of cleansing and expurgation.

14. *Six to eight weeks* would in general seem to be a sufficient period of detention for all *suspected* vessels from yellow fever ports, and for their crews and passengers; provided, no persons from on shore employed in guarding or cleansing such vessels, and who have lived below decks or in the cabins or holds of such vessels, and none of the crews or passengers, have fallen sick of yellow fever during that period. And, provided also, that the luggage and effects, the trunks, chests, clothes, bed linen, &c. of such crews and passengers, have been thoroughly washed and aired, and no persons during that time have received the disease from these sources of transmission. Such restrictions should be enforced with particular care upon *vessels of war*, as from their necessarily crowded crews, for the reasons above given, a greater number of cases of sickness must have occurred on board, whereby the virus of the disease acquires so much the greater degree of malignity.

The instance of the *Vandalia*, sloop of war, from the West Indies, in the autumn of 1844 (like many other previous similar instances), is a case in point; the imported virus which proved fatal to so many in the tropics and on board, having acquired such malignity, that

several of the crew fell sick, even in the *cool weather*, some *few days* after her arrival at Norfolk.

15. It follows from the above considerations, therefore, where vessels come from *distant* equatorial or intra-tropical countries, requiring long voyages of from *two to three months*, before they reach our coast, and which have touched at no *intermediate* ports, have had no yellow fever on board, and have had no intercommunication on the voyage with vessels from intra-tropical yellow fever ports in the West Indies or upon the coast of Africa, that such vessels, nor their crews nor passengers, need not under any circumstances be subjected to quarantine restrictions; even though bringing damaged or putrid cargoes of hides, coffee, fruit, &c., except that for the reasons already given, such importations of filth ought not to be permitted to be super-added in the summer season to that which may be already existing in our city.

16. As to interdicting or preventing merchants or other inhabitants in the city from going on board such vessels, or having intercourse with their crews or passengers; or interdicting the crews and passengers of *such vessels* from *going on shore any where*, and with their effects: or imposing any restraints upon the cargoes (with the exceptions above stated), such restrictions are entirely unnecessary, and so far as concerns the possibility of propagating from such vessels, crews or passengers, any contagious or dangerous fever, yellow fever or otherwise, all such stringent measures are an unjustifiable oppression upon our commerce, and upon the rights and property and persons of the community at large, while they serve only as a source of emolument to official functionaries who are interested in preventing their abolition.

QUESTION IV. *If a vessel arrive from a sickly port, without any sickness on board during the passage, and on inspection by the proper officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection—if not, how long after?*

ANSWER. 1. From, as I have stated, the impossibility of arriving at the truth in such cases, a certain period of detention at quarantine, is what prudence dictates; and the length of time must be left to the judgment of a *discreet* and *conscientious* functionary, sufficiently educated and experienced in his profession, to know what is the probable

character of the disease prevailing at the sickly ports in question, and to discriminate between the different types of fever, foreign and domestic, *exotic* or indigenous.

The reason why such vessels should be subjected to a provisional or experimental quarantine, is this : that some of the crew very probably may have died or been sick of yellow fever at the sickly port, while their unwashed effects have been packed away on board, just perhaps on the eve of sailing and before time or opportunity have offered to cleanse them. If, however, it can be *absolutely* ascertained, that there has been no sickness on board at any time, either at the sickly port or during the voyage, little apprehension, if any, can be entertained from such vessels, or their cargoes, crews or passengers. Nevertheless, such vessels, however pure in themselves, may become the unconscious vehicles or medium of transmitting the most deadly form of yellow fever virus,—through, for example, having had shipped on board of them, previous to their departure, the effects of some person or persons who have died on shore.

2. It is, therefore, perhaps, most judicious to subject every such vessel, and every vessel whatever, arriving here during our summer months or hot season, from a *sickly*, that is, a yellow fever port, where yellow fever was prevailing or existed at the time of their departure, to the provisional *surveillance*, detention and cleansing, &c., already described.

3. You will recollect what occurred in the summer of 1843, by permitting the schooner *Vanda*, from Guadaloupe, where the yellow fever was prevailing to great extent among the large number of *northern* shipping there, loaded with lumber to repair the destruction caused at that island by the earthquake. This schooner made a rapid voyage of a few days to this port, stopping the first or second day out from Guadaloupe, at St. Martin's, for salt, where one of her officers taken sick at Guadaloupe died, as the affidavit of the supercargo, Colonel Field, shows, of yellow fever. Several of the crew had fever on the voyage thence to New-York, and one whom I saw and who related out his case to me, appears to have had this disease. One or two persons were landed from her sick at Quarantine. Notwithstanding which, the health officer, after a very few days detention of the vessel, permitted her to ascend our river to her real destination, which was Rondout, where the yellow fever or black vomit of the

West Indies, in its most unqualified and unequivocal form, was transmitted from said schooner Vanda, either directly or by contagion, to some 30 or more persons, proving fatal to nearly two-thirds of the cases. My published official report on the subject to Alderman Scoles of the New-York board of health, and the detailed account which I possess and design to give of this occurrence, as well as the *verdict* pronounced in a certain libel suit, by the people of the county of Ulster, showing what was the common sense of the citizens there on the character of this fever, are some of the *data* which I shall rely upon to sustain the positions I have taken.

4. As to the cargoes of apparently healthy vessels from sickly ports, its *danger* is *contingent*, as said before, upon cases of yellow fever having occurred in such vessels.

QUESTION V. *If a vessel arrive from any port, in whatever latitude, such port being healthy at the time of the departure, without any sickness on board during the passage, and on inspection by the proper officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection?*

ANSWER. 1. All such vessels, if they arrive from an *extra-tropical* port, may, with a due regard to restrictions as to putrid or decayed or damaged cargo, &c., pointed out above, be at once admitted to the wharves of the city.

2. If, however, such vessels arrive during our hot season, from an *intra-tropical* port, whether that port be sickly or not, they ought to be subjected to a provisional or precautionary quarantine of a certain duration, and to cleansing, &c., as above described.

QUESTION VI. *Would the length of time occupied by the passage from port to port have any effect upon the answers to be given to the two last questions?*

ANSWER. 1. The *length of time of the voyage*, is a point of great importance, and is fully considered in the answers above. In reference, however, to the two *last questions*, it would have an especial bearing. Thus: the *shorter* the voyage the more the danger, as demonstrated almost every summer at New Orleans, by the voyages of *two or three days only* from *Havana*. For, although, Havana at

the time of the departure of a vessel, may be perfectly healthy (as it always is apart from its shipping of northern crews), yet vessels with northern crews may leave there in the hot season with such crews or persons on board all in apparent health; while the *primitive elements* (above explained), which will generate or produce yellow fever in them, will not have been fully developed or matured into action in their systems, until the vessel shall perhaps have been from two to five days at sea or have arrived at her destination. Yellow fever will then make its appearance, and consequently such vessels, as happens every year at New Orleans, are of the most dangerous character, and become *regular importers* of yellow fever into that city, though admitted and treated as *healthy vessels*.

2. The same remarks, deducting for the less commercial intercourse between them and the West Indies, than between New Orleans and Havana, &c., apply with equal force (the less population and more salubrious positions being also allowed for), to Mobile, Pensacola, St. Marks, Key West, St. Augustine, &c., from their near proximity to the tropics.

QUESTION VII. *If a vessel arrive from Europe, having had no infectious or contagious disease during the voyage, and the passengers on her arrival are all healthy, is it prudent to allow the vessel with her passengers to come immediately to the city?*

ANSWER. 1. Undoubtedly such *European* vessels, if there be no *smallpox* or *typhus fever* on board, the only contagious diseases of a dangerous character, that have ever been found to exist in such vessels, may at once be admitted up to the wharves of our city. Such vessels are *extra-tropical*, and unless they have communicated on the voyage, or *in this port after their arrival*, with *intra-tropical* sickly yellow fever vessels, or have passed through intra-tropical parallels of latitude on their voyage, they cannot by any possibility engender or introduce yellow fever in this latitude, however crowded with European emigrants of high northern constitutions.

2. It is far safer, in my judgment, *never to permit* such emigrant vessels to come *near the Quarantine ground at all*, during the hot season, though it is the established and reprehensible practice to do so. My objection is, that they might possibly contract *yellow fever* from yellow fever vessels and cases detained there, inasmuch as the emigrants in question, as we have already explained in previous an-

swers, are, from their *high northern constitutions*, peculiarly predisposed to this disease; but, however, cannot notwithstanding contract this disease, except *within the tropics* by solar heat, or else contagion there acting upon them, or if *without the tropics*, by *contagion* alone.

QUESTION VIII. *In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit their cargoes to be brought to the city; and if so, ought there to be a discrimination as to the articles, and what articles of merchandize are most likely to communicate the disease?*

ANSWER. 1. This question is fully answered above. A vessel that cannot with safety be allowed to come to the wharves, must be a *suspected vessel*; i. e. a vessel as we presume with a *northern crew* from an *intra-tropical* healthy port,—or from an *intra-tropical* yellow fever sickly port,—or from an *extra-tropical* port where yellow fever had been introduced,—or, more than all, a vessel on board of which there is reason to believe yellow fever has actually occurred. Consequently, such suspected vessel, whatever be her cargo, ought never to be permitted to come to the city, nor should any of her cargo be brought into the city, until the provisional or precautionary quarantine above explained, has been fully tested upon the vessel, the crews, passengers, cargo, effects, &c.

2. All such cargoes as are of a *porous* character or texture, in the material of the cargo itself, or in that in which it is contained, are, for the reasons above explained, of a dangerous description, whether decayed or clean, and sound or not.

The imbibition of the virus, however, by such substances, is contingent and dependent of course altogether upon and presumptive of the *pre-existence* of cases of yellow fever on board such vessels.

3. *Ceteris paribus*, however, and exclusive of the consideration of the porous envelopes of cargoes, we should deem all such cargoes to be sound as consist of rum, sugars, and all other West India or tropical products, whether spices, fruits, cigars, or otherwise, whether damaged or not,—in fact, the cargo, whatever may be its nature or from whatever place it may come, is, *per se*, whether decayed or not, or whether it be animal or vegetable, hides, jerked beef, cotton, coffee, salt, rum, molasses, fruits, pimento, or otherwise, utterly *innocuous*, and has nothing whatever to do with the question, unless it has be-

come *infected* by the previous existence of yellow fever cases on board the vessel, which *contingency must precede*. A sound discretion will then readily determine what portions or descriptions of such cargoes may with safety be permitted to come into the city.

4. The preference should undoubtedly be given to such cargoes as by their *aromatic* and *antiseptic* or *preservative* qualities are naturally hostile to or subversive of the generation or reproduction of all morbid or contagious or infectious disease. So also should cargoes of fruits, &c, *unenclosed* in envelopes, have the preference, as perfectly innocent.

QUESTION IX. *In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit the passengers immediately to enter the city?*

ANSWER. 1. This question, like the last, pre-supposes that the vessel is suspected of containing yellow fever virus on board. The question of admitting the crews or passengers of such vessels to come to the city, is one of great importance, as may be seen from what I have said above.

2. *Ceteris paribus* and *per se*, such crews or passengers are *infinitely more dangerous* than any cargo whatever. Some of them may have had the yellow fever, and may have recovered, and may appear to be well; but they may also have *unwashed clothing* or *bedding* on board, stowed or packed away in chests, &c., and infected with yellow fever virus, imbibed from their persons during their illness at the yellow fever port or on the voyage.

3. Certainly, if the vessel itself is considered *unsafe* to come to the city, the crews or passengers must be equally or more unsafe; because the vessel has derived its infection and danger from *them*. Whereas the custom is, to lay violent hands on the cargo, and to turn the crews or passengers adrift to go any where; when in truth, they and their effects may and must be of the most dangerous character, if yellow fever has existed on board. The rule ought to be reversed, if the vessel has been *proved* to have been thoroughly expurgated and the cargoes well aired; in these cases we should let the cargo go free, and exercise due vigilance on the crews and passengers and their effects for a certain time.

4. It is impossible, from the tenor of this and the previous question, to consider the vessel otherwise than as *unsafe*; i. e. suspected of yellow fever infection. Consequently, such vessels must in every event, be subjected to a precautionary quarantine.

QUESTION X. *Will fruits, vegetables or animal matter, while in a vessel, ORIGINATE the malignant yellow fever; and if so, from which is there the most danger?*

ANSWER. We have replied to this above, that yellow fever never was nor never can be produced from such sources. As to their danger, we have also explained the whole above, as we view it.

QUESTION XI. *Has the introduction of the CROTON WATER rendered the city of New-York less liable to be visited by the yellow fever; and will it prevent its spreading should cases of it occur?*

ANSWER. To the first branch of this question, I answer emphatically, *yes*. To the second branch, I answer, that this event would not *prevent* the introduction, but would present an opposing obstacle to the spread of yellow fever.

I have not had it in my power to obtain a statistical table of the *relative mortality* in the city since and before the Croton was introduced, but I am satisfied of the truth, that making due allowance for the increase of population since its introduction (1842), the *ratio* of deaths has sensibly and notably diminished.

This much can be, I think, asserted with safety; that there has not, since then, existed at any time in this city, a *prevalence* in any district, quarter, or street, of any disease or fever whatever; not even, as has so often happened before, a spread of varioloid or other contagion through certain neighborhoods, producing marked mortality and much alarm. Even in the common yearly and necessary recurrence of measles, scarlet fever, whooping-cough, &c., these diseases do not now *radiate* and become diffused any where, but are, as it were, dispersed and scattered about, as if isolated and broken up by the purifying streams of the Croton that wash out our streets, and by the wholesome vapors that the spray of our fountains impart to the atmosphere.

Not only has our city itself acquired a tenfold degree of salubrity from the self-cleansing power which it now possesses, and which is
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constantly in operation; but the inhabitants themselves more directly feel its beneficial effects on their health, by the perpetual use of this beverage as a drink, and in commixture with our food in cookery, and its abundant use externally, in bathing, washing and every operation that can conduce to the cleansing of the persons, wearing apparel, the apartments of all our houses, their yards, &c.

In truth, from its cheapness and from its purity, freshness and admirable qualities of every kind, its detergent and purifying operations are in universal use in every street, lane, private house or public building, or hotel or factory, in this great metropolis.

Its accessibility to all, and its profusion in quantity, add still more to its value, and the cooling effect of the agreeable humidity it communicates to the heated summer atmosphere, which in former years was so oppressive, is noticed as it is enjoyed by every one.

From all these causes the general tone of the public health has, in my opinion, been greatly augmented, and the strength of the constitution in our population generally made more robust, and therefore more capable of resisting disease or fever of every kind.

QUESTION XII. *Is the malignant yellow fever the same as the Bulam fever on the coast of Africa, and does it originate there; and if prevalent in any other place, is it modified by climate?*

ANSWER. 1. The yellow fever is the same specific, idiopathic, *sui generis* disease, every where, and is always characterised by a *combination and assemblage, and by an order and succession* of symptoms or morbid phenomena, more peculiar and distinct than those perhaps of almost any other fever.

The Bulam [yellow] fever, so called, which was generated and reproduced to a great extent, and therefore in great malignity among the northern crew and emigrants on board of an English vessel on the coast of Africa, and which vessel thence proceeded to the West Indies, was undoubtedly an example of pure and unequivocal yellow fever or black vomit; the facts in the case having been fully so established by the illustrious Chisholm.

2. The yellow fever may originate at Bulam as well as in any other of the intra-tropical latitudes we have designated. Suppose yellow fever should break out at Havana in an English vessel of war

with an English crew, or in an American vessel of war with an American crew of northern constitutions, this yellow fever would still be yellow fever, though the vessel should sail immediately to and arrive at intra-tropical latitudes upon the coast of Africa, and that new cases should there be developed among those on board, or communicated to northern men in other vessels with which she might come in contact upon that coast.

3. We have shown above how yellow fever may and does originate on the coast of Africa, in crews of northern vessels from Europe.

4. In respect to the concluding branch of your question, how far yellow fever, if prevalent in any other place than on the coast of Africa, may be modified by climate, I reply :

That yellow fever, as I have already stated, can only become *prevalent* or diffused or epidemic, where the circumstances which favor its *propagation* or re-production, through contagion, exist in all their force. In extra-tropical latitudes, this re-production from the imported tropical virus (an indispensable preliminary), is most common, because under the favoring circumstances of our extreme elevation of temperature in summer, and the strong predisposition of our northern constitutions, the spark is readily communicated to such combustible elements. Whereas, in intra-tropical latitudes, after the disease has once become generated, as I have already explained, in northern persons, from its primary elements, its re-production must depend upon its finding the pabulum required to give it a contagious propagation, i. e. other persons of northern constitution, recently arrived and placed in a crowded and confined atmosphere, which circumstances are more rarely found combined within the tropics. However, this result does sometimes occur.

Thus in the harbor of Havana, for example, in summer, when northern crews are collected in unusual numbers, as I have seen in merchant vessels from Hamburg and Bremen, in Germany, and from Portland, Kennebeck, Boston, New-York, &c., &c., in America, and in Spanish vessels of war, with crews from Castile and other ports of the *north* of old Spain: yellow fever having been once *engendered* on board such vessels, or *introduced* into them, will spread rapidly, and become below decks, in the confined or *crowded* and therefore *vitiated* (though *ventilated*) atmosphere of such vessels, especially in vessels of war from the necessarily great number of their crews,

peculiarly malignant and fatal. So in transports, &c., with northern crews, and in garrisons and barracks (as often happens) with soldiers from northern countries and latitudes. And on *some occasions*, from its *peculiar malignity* under such circumstances, it has been communicated at Havana, Grenada, &c., from the shipping to the shore, proving in a *few* instances fatal even to the acclimated resident, or even the *native*, attacking also even the *native negro* in *rare cases*, but *never*, in the West Indies, known to have ended fatally in this last class. So also do the negroes, native here, always possess a greater *immunity* than the whites.

5. So also when imported here into our northern cities, whether it is brought from within the tropics, or *from any of our extra-tropical sea ports or towns*, in which it had been *previously introduced from the tropics*, the disease will, under similar favoring circumstances, rapidly acquire an epidemic character.

6. Yellow fever is in no other way modified by climate, except in this: that in persons of northern constitutions, when in the tropics, it will, under circumstances of crowding, become more virulent than in our latitudes, and be of a day or two shorter duration and in its course also more fatal. Because these *men of the north*, who are the peculiar and *almost exclusive* subjects of it under such circumstances, in intra-tropical latitudes, are, when thus congregated together in confined apartments, *doubly*, as it were, exposed to an attack of the disease, viz: *first*, directly and *per se*, from the primitive sources or elements which first generate yellow fever, i. e. a continued, steady, intra-tropical temperature, night and day, acting on a constitution or organization from the north; and *secondly*, by transmission, i. e. through the contagious virus, which is favored in its reproduction, as well by the fact that the deoxygenated, impure condition of a crowded atmosphere, deteriorated by human effluvia and privation of oxygen, furnishes in itself a more ready solvent or medium for the propagation of this contagious virus, *first engendered* in the manner we have described, as by the undeniable fact also, that the lowering of the tone of the vital energies of the system, by the breathing of such atmosphere, greatly predisposes to the reception of any morbid taint or poison whatever, whether contagious or infectious—human or paludal.

7. Whereas when the contagious virus of yellow fever has been introduced in summer into northern latitudes, though our climate, so

far as regards its generally uniform alternation of *comparatively* cool nights, and hot days, be rather adverse than favorable to the reproduction and spread of yellow fever, the *northern constitutions*, on the other hand, of the greater mass of our citizens and population, is a powerfully *predisposing* cause to such epidemic or contagious extension of the disease, as above explained.

8. Hence it is that the yellow fever in former years in New-York and other northern cities, spread with such epidemic fury, and made such dreadful ravages, as in New-York, particularly in the scourge of 1798, &c. Because our people were deluded and misled by the assurances of prominent medical persons, who, too indolent or afraid to grapple with the disease, or incapable of making the proper investigations and distinctions, *bravely* fulminated their theories from the closet, and exhorted our citizens to *continue at their homes and their occupations*, as the disease was not foreign or exotic, or imported or contagious, but a *native indigenous production* of this part of our climate, and of every latitude; in short, a mere ordinary *every day bilious remittent*!

Hence the heated atmosphere of confined streets, lanes or apartments, especially in the crowded, small and uncleanly dwellings of the poor, becoming rapidly deteriorated, as we have explained, furnished wings to the contagion, which spread havoc in its march.

9. The decimation of our population, and the frightful deaths by black vomit, and all the appalling symptoms of yellow fever, soon taught our citizens a melancholy lesson, which their own eyes and common sense were witness to, touching the *peculiar* and *terrific* character of this foreign tropical pestilence.

10. Judging, therefore, for themselves, and commencing with the years 1819 and 1822, the disease having been again introduced in those years, the quarters of the city into which it had been imported, or to which it had spread or had been transmitted, were regularly enclosed and placed under a *cordon sanitaire*, while the population of those infected districts, and the citizens generally, seeking refuge from the pestilence in the pure diluted air of the country, soon put a stop to its farther extension.

11. The reverse of this in some measure takes place, in regard to what transpires within the tropics. There the *constitution* of the

acclimated *native* or resident, especially the former, is a constant antagonist principle or repellant obstacle to an attack of the disease, which *immunity* they derive from the climate, or to speak more properly, the vast changes or modifications which a continued residence in *intra-tropical* latitudes produces upon the the human organization, in reference to the blood, tissues and organs, as compared with what exists in, and constitutes the peculiarity and essential attributes of the organization of a northern man, or resident or native of a cold climate or temperate latitudes.

12. The fuctions of the organization as modified by climate (a subject first broached in extenso by myself, in my work on the *Topography, Weather and Diseases of the Bahama Islands*, New-York, 1826), are in fact in a great measure *reversed* under the circumstances of position mentioned.

13. Thus, therefore, the two great PRIMARY ELEMENTS OF YELLOW FEVER, to wit : the *constitution of a northern man* and an *intra-tropical solar temperature*, when they come into immediate conflict in the tropics, where alone they can come into conflict, are as constantly coöperating in the production and reproduction of yellow fever.

QUESTION XIII. *Is the yellow fever communicated by personal contact, or by an infected atmosphere, or both ?*

ANSWER. 1. Yellow fever, as we have shown, is communicated both by personal contact, and through the medium of the air, or by both, and especially by the latter, whenever the virus, as we have explained, becomes more concentrated, i. e. reaches a certain *dose* or *intensity*, from the accumulation of cases within given limits, whereby the air soon becomes impregnated, and rapidly propagates the disease.

2. The atmosphere is in no other way *infected* with yellow fever, or yellow fever virus or contagion, than by becoming impregnated with this virus as exhaled or excreted or given off from the breath, skin, &c., of the cases of the disease that have occurred in such atmosphere.

QUESTION XIV. *What effect has the progress of medical science had upon the policy of enlightened governments in relation to quarantine laws ?*

ANSWER. 1. The progress of medical science, has had (but to some extent only), precisely the effect which it should have had on

the policy of enlightened governments in relation to the subject of quarantine.

For *medical science*, or *truth*, in opposition to and in contra-distinction with the reckless dogmas and closet speculations of the great body of medical writers upon these subjects, a *vast majority* of whom have *never seen*, and *practically speaking*, are *totally ignorant of yellow fever*; has *now* completely established the fact in the mind of every intelligent and unbiassed physician, that yellow fever, or the black vomit, is a *specific* and idiopathic type of fever *sui generis*, peculiar and indigenous to the tropics, and capable of being imported into extra-tropical latitudes.

2. It is now generally, if not universally acknowledged, by all those who are *practically* conversant with this disease, both as it appears within and without the tropics, and who have closely watched and compared its symptoms, and examined the *peculiar* structural or morbid changes which are found, both during life and after death, that it has no relation or affinity whatever to or with typhus or typhoid fever, ardent inflammatory fever, continued fever, intermittents, remittents, bilious remittents, &c., whatever be the fanciful epithets, such as congestive, malignant, ataxic, adynamic, &c., which some persons choose to attach to yellow fever. All of which has already been dwelt upon in the foregoing answers.

3. Where views opposite to those I entertain, prevail, they do so, in my opinion, through false representations of pretended investigations into the origin and nature of yellow fever. Where no obstructions, consequently, are interposed to the importation of yellow fever, by establishing proper quarantine restrictions, it is, in my judgment, because *medical science*, so far as its influence is exercised upon the community, and upon municipal or State authorities, and public opinion, has not kept pace with the advance of medical *knowledge* and facts, and with the common sense of the public at large.

4. I need not here repeat what I have already said in relation to the necessity of a *rigid quarantine* under certain circumstances, and of the equal necessity of a total revision, if not entire abrogation, of a great number of utterly preposterous and grievously oppressive provisions and restrictions, now existing in, or engrafted upon, our statutes and ordinances relating to this subject.

5. I should deem it a useless expenditure of time to consume your attention with a notice of the controversies which have been set on foot of late years at London, and Paris, and in other parts of Europe, with a view chiefly to the abolition of all quarantine restrictions, quarantine establishments, and lazarettoes, whatever, in relation to any disease, plague, yellow fever, or otherwise : because, in respect to yellow fever or black vomit, it will be found upon examining those controversial publications, that the great body of the physicians, as well as of the people of Europe, having had little or no opportunity of any personal experience in the disease, since the year 1820, and incapable, therefore, of appreciating the admirable and faithful descriptions given of it there, and anterior to that epoch, by Arejula, Sir Jas. Fellowes, Sir Joseph Gilpin, Pym, Bally, Pariset, &c., are in a measure incompetent to determine this question.

While, on the other hand, the true character of the disease, commencing with the monographs of the earliest writers, as *Towne*, *Hillary*, *Warren*, *Roupe*, &c., and the not less masterly descriptions of those who succeeded them, as *Chisholm*, *Blane*, *Lining*, (of Charleston, S. C.,) *Hosack*, *Moseley*, and a crowd of others, together with the more recent productions of *Stroebel*, of Charleston, and *Monette*, of Washington, (Mississippi,) &c., have been entirely lost sight of, to give place to the more congenial and crude speculations and misrepresentations of empirical adventurers, many of whom, with mercenary motives, designed to flatter the authorities of different governments with the delusive hope that commerce might be disburthened of every such restriction, as a relic of barbarism, have not hesitated to assert, and to disseminate on the subject of yellow fever, a tissue of heresies and errors, which every practical physician, and every common citizen acquainted with this disease, as it has prevailed in our sea-ports and in the West Indies, know to be without the shadow of a foundation.

6. What may be suitable for quarantine restrictions in Europe against the importation of yellow fever, is no exact rule for us.

So, also, our situation and climate, and our close proximity to, and incessant commercial intercourse with, the tropics, are at total variance with what may be deemed orthodox in medical philosophy upon this subject, at Boston or Halifax.

7. We must establish a quarantine for ourselves, and adapted to the peculiarities of our city and its numerous population of every nation and color, but all of whom are chiefly men of the north, and of whom at least 100,000, out of our 450,000, are foreigners in birth or recently arrived, and possessing, therefore, *higher northern* constitutions than our natives.

8. Very little or no danger could in general be apprehended from the importation of yellow fever from sea ports far to the north of New-York, as the cooler climate in them, generally soon extinguishes the disease.

9. Abstractedly speaking, therefore, it would, in a great measure, be a matter of indifference to us, whether such sea ports as Boston, Halifax, &c., do or do not think proper to impose restrictions against yellow fever. But it is a matter of great importance, however, that we should protect ourselves against the evil consequences which may result to our own city, and to our own inhabitants, from the *facilities* and *encouragement* which Boston, or any other port or city on our sea coast, in the plenitude of their municipal power, and under the delusion of their peculiar theories, might think proper to accord to the indiscriminate admission of a deadly tropical pestilence into our country.

10. We must be the more vigilant on that account, to guard against the clandestine introduction of this disease into our city, through such channels, and especially take care not to allow our noble Hudson and its waters and connecting rivers and sounds, to be made a *convenience* or *place of transit* for shipping of other ports to introduce the black vomit, direct from the West Indies, into the midst of our river towns, and into the very heart of our State (as in the Rondout or Vanda affair, 1843); setting our quarantine laws (whether by collusion or otherwise), at total defiance; passing to and fro with their dangerous small craft, and making their voyages from *Guadaloupe to Rondout*, and from *Rondout to Boston*, via. the port and harbor of New-York, and in the immediate view of our wharves, as though this great emporium of the commerce of the western world, were but some insignificant village upon the sea coast!

I have the honor to be, very respectfully,

Your obedient servant,

P. S. TOWNSEND, M. D.

ANSWERS OF JOHN W. FRANCIS, M. D.

New-York, December 20th, 1845.

GENTLEMEN,

Circumstances beyond my control, I regret to state, have led me to delay an answer to your communication until the present time. I shall now, however, with all frankness, and with the aids which much previous reading and some personal experience have given me, endeavor to furnish such data on the interesting subject of your letter, as may contribute, in a partial degree at least, to throw light on the momentous and perplexing topics involved in your deliberations. I am fully aware how voluminous have been the discussions on the nature of yellow fever; how various the opinions which from time to time have been advanced concerning its specific character and its means of propagation; how conflicting the statements, by writers of acknowledged merit and renown, touching its domestic or foreign origin, and as necessarily associated with this particular branch of inquiry; how discordant have been the views suggested as justifiable and salutary, or otherwise, on the disputed subject of quarantine regulations. Nevertheless, these circumstances which irresistibly lead to caution in the declaration of individual belief, are not so oppressive as to forbid a candid expression of opinion, when that opinion is the result of observation, study and reflection, on perhaps the most vexed question in medical philosophy, and admitted by all to involve responsibilities of vital interest to humanity.

Question 1.—I do not think the yellow fever is of domestic origin at the port of New-York. The imperfect records which we possess of the appearance of this disease among us so early as the beginning of 1700, in 1742-3 and the like, can not be brought forward to prove decidedly either its foreign or domestic origin. Its appearance in the city of New-York in 1791, 1795, 1798, 1801, 1803, 1805, 1819, and

in 1822, and the memorable case which occurred in 1839, show, I think, the foreign origin of the calamity. In every one of these seasons the evidence of the pestilence having been brought higher by vessels from foreign ports, can, I believe, be demonstrated by a careful investigation of recorded facts.

Question 2.—The yellow fever, it seems to me, is imported by vessels from places more or less remote, and consequently is derived from sources which we may pronounce exotic. The season of the year most favorable to its introduction and spread is, when the thermometrical range of heat is between 75° and 80° and upwards; hence we find it to have made its first appearance in this city early in July, and in August, September, and even in October. In company with the health officer of the port of New-York, Dr. Doane, I have seen the disease as early as in the beginning of April, at the hospital at the quarantine, Staten Island. All reports of its occurrence and prevalence in the winter season are justly deemed fabulous, and it is universally admitted that frost extinguishes the morbid emanations of the disease, and destroys the progress of the disorder. The Bulam and the yellow fever have been brought primarily among us from the coast of Africa, and from the tropical regions of the West Indies. The West Indies seem to be the native climate of the yellow fever, and it has not been inaptly termed the vestal fire of many of those islands.

Question 3.—It is most likely to arise from the foul air of ships, upon breaking bulk, and from their cargoes: while passengers themselves are a less frequent cause of its occurrence. In the former circumstances, the morbid effluvium is most concentrated and of greater potency: in the latter, the infectious agent has less influence.

Question 4.—A vessel may arrive from a sickly port without any sickness having occurred on board during the passage, and may, by inspection, be pronounced in all respects healthy, and the cargo appear all sound; and yet it may not be prudent to allow her to come to the wharf immediately after inspection. It may be requisite that several days elapse, even after measures of purification have been adopted, before exemption from pestilential emanations be secured, so subtle is the development of febrile infection and contagion. Pestilential or infectious disorders have broken out from ships after said ships have touched at a port with impunity, and proceeded to other their destined ports, which have become infected by said vessels,

these vessels having originally or at first left a sickly port, and having been during their voyage free from apparent causes of disease, and the voyage promising entire security from such calamity. Such is the history, in part, of the mysterious action of infection in the progress of pestilence.

Question 5—It may, in general, be entirely safe to allow such vessels to come to the wharves : a cautious inspection, however, will always be advantageously enforced, as a measure of greater security.

Question 6.—The answers to the 5th and 6th interrogatories would unquestionably be modified by the time occupied by the length of the voyage from port to port. Yet it is not to be overlooked, that in vessels arriving from ports sickly at their departure, the *materies morbi* which may have been derived from such ports, may, in some instances, acquire additional venom from the greater length of the time of the voyage.

Question 7.—The answer to the interrogatory involved in this seventh query may be fairly given, that such vessels and passengers could, prudently, come immediately to the city ; if, however, diseases of febrile contagion prevailed epidemically at the port whence the vessels sailed, restrictive measures might justifiably be enforced, both on the vessel and on her passengers. A proper regard for public security might demand that such vessels be duly ventilated. A clean bill of health might also be requisite, the better to remove all doubts. However, it should be strongly borne in mind that the disease most likely to occur on board of emigrant vessels arriving from Europe, is typhus or ship fever of a malignant character, admitted by all candid practitioners of medicine to be an infectious and dangerous disorder. Thus the ship *Eutaw*, so late as in 1842, arriving from Liverpool at the quarantine ground, Staten Island, with no less than 120 cases of malignant ship fever on board, came under the medical management of Dr. Doane, at the quarantine ground. I need not advert to the disastrous consequences which might have ensued, had these passengers been permitted to come up to our city, or scatter themselves through the country.

Question 8.—The cargoes of suspected vessels, such as are referred to in the 8th interrogatory, might prove the source of vast evil, in giving wings to pestilential disease, if allowed to be brought forthwith to the city. I think the existing laws discriminate what substances are most capable of retaining the fomites of pestilence.

Question 9.—It assuredly is not prudent; and such passengers might very properly be debarred immediate entrance into the city.

Question 10.—Both vegetable and animal matter are capable of imbibing and retaining, for a time, the semina of malignant disease. The period is uncertain. Brought in vessels from ports infected with yellow fever, they, like the vessels themselves and the passengers, are capable of becoming the source of malignant disorder, when arriving at our wharves within certain seasons of thermometrical heat, of moisture, and of other concurring circumstances. It is impossible to pronounce whether there be greater danger from vegetable or from animal substances. By some it is thought that a combination of decayed animal and vegetable matters creates the most noxious form of malaria.

Question 11.—The introduction of the Croton water, inasmuch as it is presumed that by that blessing a greater degree of cleanliness will characterize the city, will prove beneficial in diminishing the chances of the occurrence and spread of pestilential or yellow fever.

Question 12.—Much has been written on the several characteristics of these two forms of fever. The Bulam fever on the coast of Africa, and the yellow fever of the West Indies, are distinct types of disease. The Bulam fever is unquestionably the more malignant form of these two affections. It has ravaged many of the West India islands, and we have reason to believe it to have been introduced into this country. The occurrences of 1793 sustain this doctrine. Climate seems to have but a partial influence in mitigating its character.

Question 13.—A vitiated atmosphere seems to give power to the extension of the yellow fever. The history of the disease in our own city, at different periods, illustrates this truth. Concurring circumstances may occasion the communication of the disorder from one person to another. The facts recorded by the College of Physicians of Philadelphia, show the existence of the disease in Germantown, near that city, in the pure air of the country, and we have like evidence of a similar truth of its introduction in the pure air of Huntington, Long-Island, and also when in 1811 it was introduced at Perth-Amboy, New-Jersey. Testimony in support of this position might also be derived from occurrences at Newport, R. I., Bristol, Penn., &c. Yet after all, the yellow fever is to be pronounced an infectious rather than a contagious disorder.

Question 14.—The conflicting facts which are adduced, by the supporters and by the opponents of quarantine laws, still leaves this important subject in an unsettled state. The experience which we have painfully had in our country, of the ravages of the yellow fever in our seaport towns, the almost unanimous opinion of the most eminent of our medical observers, who have practically encountered the disorder, that the disease is marked by symptoms unlike those which obtain with every other type of our indigenous fevers, and the peculiarities of treatment which it summons us to enforce, have led to a deep conviction that it is a form of malady of distinctive attributes, and has a specific nosological character. We no longer hear of the direful effects of new made ground in giving origin to the disorder, and that our climate is the especial latitude of pestilence. The mistaken association of our lake fevers and those of the inland country, with the yellow fever of our Atlantic cities, is equally unauthorized by science, as the pernicious theory that the malignant Asiatic cholera and the cholera morbus of our summer heat are one and identical, in cause and consequence. No sound system of medical reasoning will tolerate the idea, that contagion is a mere bugbear, a phantom of the imagination. We search in vain for a solitary case of yellow fever originating, from the time of its first appearance among us, from that vast body of new-made ground in the heart of our city, designated by the name of the Collect ; and the fraudulent speculation in science, that the visitation of the disease was occasioned, in 1822, by the sepulchral grounds of Trinity church, is now justly discarded by every principle of philosophy, nay, by the prominent abettors themselves of that theory. Since our quarantine laws have been more judiciously enforced, we seem to have enjoyed a longer exemption from the disease in our metropolis ; and those who of late years have been solicitous practically to study its nature, have been compelled to visit the shipping and hospitals at Staten-Island, in order to gratify their praiseworthy desire, with the cases of the pestilence, which at each returning season may, perhaps, there be found.

Hence the inference seems clear, that quarantine regulations, however onerous they may prove, have also their benefits. That they are susceptible of improvements, and that many of the exactions which they impose might be removed or lessened, is perhaps equally clear. I will take the liberty of referring the honorable the committee to a communication on our quarantine laws, made to the New-York board of health,

and signed by the then physician of the port of New-York, Dr. A. T. Doane, by Dr. William Turner, health commissioner, and by the undersigned, then resident physician of the city of New-York. It may be found in the minutes of the board of health, and in the first volume of the New-York Journal of Medicine, published by Dr. Forrey.

With all due consideration.

JOHN W. FRANCIS.

To Messrs. D. E. WHEELER,
C. COMSTOCK,
R. H. HINE,
Committee.

ANSWERS OF WILLIAM SWEETSER, M. D.

New York, August 16th, 1845.

TO THE COMMITTEE APPOINTED TO EXAMINE THE QUARANTINE LAWS
OF THE PORT OF NEW-YORK.

I embrace, gentlemen, the earliest opportunity to reply to the *interrogatories*, contained in the circular letter, which I have received from you. You are aware, I presume, that many of your inquiries involve points on which medical opinions are not agreed, and on which anything like mathematical certainty is not to be looked for in our present state of knowledge. I will endeavor now to answer the series of questions proposed by your committee, according to the best of my judgment, though you must pardon me for replying to them in a somewhat general manner, without adhering to the exact order in which they are set down.

I will begin with your 12th interrogatory: "Is the malignant yellow fever the same as the Bulam fever on the coast of Africa, and does it originate there, and, if prevalent in any other place, is it modified by climate?" I understand your committee as meaning to inquire whether the fever, more or less prevalent in different parts of the earth, especially in tropical countries, known under a variety of names, but which we generally designate by that of yellow fever, is one and the same disease? On this question our profession differ somewhat in opinion, the disease presenting such a diversity of symptoms in different periods and situations of its prevalence. It appears to me, however, highly probable that it is the same disease, as it prevails in different part of the world, though modified, as might be supposed, by the various circumstances; as of climate, constitution and habits of its subjects, &c., under which it exists.

Of the local origin of the Bulam fever, (that is, the malignant fever that prevails on the Guinea coast, and its neighboring islands,) I entertain no doubt.

The first, second, third, tenth, and thirteenth, interrogatories of the committee, involving questions relating to the origin and propagation of yellow fever, will, I think, be most readily answered by a very brief and general exposition of the causes of this fever.

1st. Of its communication by contagion. This cause deserves the most candid and cautious scrutiny, since nearly all quarantine regulations are based on the supposition of importation of the fever in question, by a specific virus or contagion. But as the term contagion, is often employed in so vague and general a signification, as synonymous with infection, miasm, malaria, &c. thereby embarrassing our inquiries, I deem it necessary in the first instance, to define what I mean to imply by a contagious disease. A contagious disease is one which propagates itself; one capable of forming by its own actions a morbid matter, which being applied to the body of another, under favorable circumstances, will engender in that other, just the same malady by which itself was produced. Contagious diseases, like living beings, secrete a matter by which they propagate themselves. Contagion, then, as I shall show you, should be understood in a different meaning from infection, malaria, miasm, &c. Contagion may be propagated directly, or indirectly; that is, through direct contact, or by becoming blended with the atmosphere, thus acting through its medium at a greater or less distance, according to circumstances. And further, by being absorbed and retained, for periods longer or shorter, according to circumstances, by certain substances, which substances, when thus imbued with morbid effluvia, are termed in medical language, *fomites*, an indirect source of contagion, very important to be considered in reference to quarantine regulations. Substances derived from the animal kingdom, manufactured or unmanufactured, as furs, feathers, bedding and body-clothes, would seem most readily to imbibe and retain the longest, such morbid effluvia. Next are ranked cotton, flax, linen, and other substances of a soft and porous texture. The more dense and hard the material, the less, of course, would be its power of absorbing contagious emanations. Should the substances imbued with contagion have been confined, as for example, body-clothes in trunks or chests, I scarce need say, that the danger from them would be materially enhanced. Instances are not wanting, where females have re-

ceived contagious diseases from washing the clothing of those who had been affected with them, even when brought across the sea. All quarantine restrictions are founded on the assumption, that disease may be imported through the medium of *fomites*.

The above remarks on *fomites*, form, you will perceive, an answer to the 8th interrogatory of the committee, relating to a removal of the cargo to the city, in cases where the vessel itself cannot with safety be allowed to come up to the wharves, and to a discrimination as to the articles of merchandize removed. The necessity of such discrimination will be inferred from what has already been said; still I should deem it most prudent as a general rule — perhaps admitting of some exceptions — that, where a vessel could not safely come to the wharves, her cargo should also remain at quarantine.

We now come to the inquiry, and one involving so many important questions relating to the subject before us: Is yellow fever contagious in the sense we have defined contagion — in other words, can it be communicated directly or indirectly from one human being to another? On this subject, the medical profession are unfortunately not agreed; contagionists and anti-contagionists still exist, although the latter seem manifestly to be gaining the advantage in respect to numbers, both among the enlightened physicians of Europe and our own country. My own view of the matter is this, viz: that if yellow fever is contagious at all, it is so but in a very feeble degree — by no means like smallpox, measles, &c.; and that it cannot, therefore, propagate itself in this manner, unless in occasional exceptions. The evidence leading to such conclusions, is this: that if the subjects laboring under it are removed to the country, or to any district where the fever does not exist, those exposed to them in such uninfected spots do not receive the disease; that is, as a general rule, for there are, as I shall state, some exceptions. Such has been shown to be the fact, in regard to the yellow fever as it prevailed in New-Orleans, Philadelphia, New-York, Boston. It generally affects particular streets or districts, and does not extend itself beyond them. I might adduce facts enough in confirmation of this point, had I space.

In Boston, this limitation of the disease, in every instance of its prevalence, has been particularly remarked. Dr. Warren, an eminent practitioner of Boston at that period, in a letter describing the fatal yellow fever which happened to that city in 1798, observes that it was

confined to particular streets, and that the contagion was *seldom* communicated in the uninfected districts ; and that he knew of no evidence of contagion being communicated by the sick when removed into the country, “ though there were many instances of such removals, under the most malignant forms which it assumed.” He says, furthermore, “ That its origin was domestic, I have not a single doubt. No instance of the arrival of any vessel from the warmer latitudes, with this sickness on board, has been discovered,” &c. Nevertheless, as there were rare instances in which the fever seemed to have been communicated out of the infected districts, Dr. Warren did not doubt but that it was in a *degree* contagious — though in but a low degree.

In the yellow fever which visited Boston in the summer of 1819, one instance occurred where a female, away from the infected part of the city, received the disease and died of it, after washing the clothes of a patient affected with yellow fever. Such positive cases do now and then happen, going to show that this fever may, in occasional examples, reproduce itself by contagion. In the case just cited, it might have been that the clothes washed, had become imbued with miasms from the infected district, and that the disease was produced through them, and not by specific contagion. On this point, however, we can attain no positive knowledge.

It is a truth, I believe, that scarce any people, either in this country or any other, where it prevails, are willing to acknowledge yellow fever, as native to their own soil.

In 1819, the yellow fever had an unusual prevalence over various parts of the United States ; the consequence of which was, that a rigid system of quarantine was enforced in most of our seaports against each other ; in New-Orleans, against our extreme northern ports, as Boston, for example ; yet in despite of these most rigid restrictions, this fever prevailed in them all, and, I entertain no doubt, was of domestic origin in them all. Indeed, I do not hesitate in the opinion, that in all cases where yellow fever has prevailed to any extent, in New-York, or any other portion of this country, its source has been local or domestic, and that a strict and judicious system of *local health laws*, will therefore be most effectual in protecting us against its invasion ; still, as examples have occurred, where this fever would seem to have been communicated by contagion — as there is a chance, to

say the least, that the disease, under certain circumstances, may be thus propagated, it is for your committee to determine whether the community should not be guarded as far as practicable, against such chance, however slight it may be.

The exhalations, or subtile effluvia arising from low, marshy, fertile grounds, in hot climates, or from large masses of decomposing vegetable, and probably also, animal matter, are now generally admitted as sources of fever, and, under certain circumstances, of yellow fever. Such poisonous emanations, are known under the name of malaria, infection, or miasms, and are the local causes to which the domestic origin of yellow fever is now generally ascribed.

Your committee will hence easily understand, how the source of yellow fever may sometimes be traced to shipping, independent of imported contagion ; and numerous examples could be adduced where malignant fevers have originated, in ships which had arrived from healthy ports, and in which no sickness had existed during their passage. Their holds were foul, either from decomposition of a portion of their cargo, or some other source, and when opened, the poisonous effluvia issued forth, infecting all who chanced to be exposed to it. Vessels coming from tropical countries, bringing, as they mostly do, vegetable substances, as fruits, coffee, &c. which are liable to decay, and being often in a leaking condition, deleterious exhalations must be generated ; though remaining imprisoned in the hold, during the passage, no disease is produced. But when the hatches are opened in port, then the malaria, or bad air, will have vent, and its poisonous influence will be more or less extensive and fatal, in proportion to the amount and intensity of the infection. Thus, yellow fever has been traced to foul vessels in Philadelphia, as to the ship *Deborah* in 1793, and the sloop *Mary* in 1799 ; and likewise in other ports.

In July, 1819, the ship *Ten Brothers* arrived at Boston from the coast of Africa. Her crew were all in good health and had been during her voyage. She remained a fortnight at quarantine, and then came up to the wharf, all on board continuing well. Her hatches were now removed, when immediately a large part of her crew, and also various others who had been employed on board, as custom house officers and laborers, and even the crews of other vessels lying alongside, were seized with yellow fever, and which, in most of the cases, terminated fatally. The hold of this vessel had become exceedingly

foul from putrefying corn. At this time, 1819, so entirely was the system of quarantine founded on the assumption of imported contagion, that the internal condition of the ship itself was not at all regarded, hence the *Ten Brothers* was not even subjected to ventilation at quarantine, her hatches not even being removed till she reached the wharf, when there issued from her close and foul hold such concentrated streams of poisonous effluvia, that nearly all who were exposed to them perished of a malignant yellow fever. That yellow fever, however, be thus produced, the aid of certain incidental influences would seem to be demanded, since foul ships are constantly arriving in our ports, while it is only occasionally that this fever is generated by them. A long continued elevation of temperature, united with stillness of the atmosphere, are among the adjuvant circumstances conducive to the development and activity of the specific poison originating yellow fever.

As yellow fever, then, may be introduced by shipping in other ways than through imported contagion, and, furthermore, as there are other diseases unequivocally contagious, against the importation of which our citizens should be protected, it is for your committee to consider whether our health officers should not be invested with powers of so general a nature — subject to so broad an interpretation, as would enable them to adapt their restrictions in regard to any individual vessel to the particular condition or circumstances of such vessel. I would respectfully suggest the inquiry, whether the powers granted to the health officers of New-York are not too specific? whether they should not be allowed a wider scope, and more general interpretation?

The yellow fever would seem to belong to hot climates and hot seasons, and hence, if imported, would be most likely to be so in the latter part of summer, and early part of autumn, and from places within or near the tropics, as the East and West Indies, the coast of Africa, and many of the southern shores of the Mediterranean, and our own southern and southwestern towns, where it is known to prevail. This will form the answer to the latter part of your second interrogatory.

To your 10th inquiry — “Will fruits, vegetables, or animal matter, while in a vessel, *originate* the malignant yellow fever, and if so, from which is there the most danger?” I reply, that all organized matter, that is, all matter that has been endowed with life, whether vegetable

or animal, would seem capable, if in sufficient abundance, and under circumstances already mentioned, as of decomposition, high degree of temperature, confined atmosphere, &c. of disengaging an infection capable of originating yellow fever. Whether animal or vegetable matter (I employ the term vegetable matter in its widest sense), is fraught with the most danger, is a question on which medical opinion is more or less divided. I should, myself, apprehend greater hazard of yellow fever from decaying vegetable, than from decaying animal matter; though others would differ from me on this point. We need further data to settle the question.

In answer to the 7th interrogatory of the committee — “If a vessel arrive from Europe,” &c. I would say decidedly, that no vessel, however free she may be from sickness, and however healthy the port whence she arrived, should be permitted, during the hot season, to come up to the wharf, until her own condition, and that of her cargo have been properly inquired into or inspected, and if found foul, until she has been subjected to a thorough ventilation and purification. In our quarantine laws, I think it even more important that the actual and present condition of the ship and her cargo should be regarded, than that of the port whence she came. We have far more satisfactory evidence, to my mind, of the origin of yellow fever in ships themselves, than of its importation by them through foreign contagion.

Your 5th inquiry — “If a vessel arrive from any port, in whatever latitude,” &c. I answer, without hesitation, in the affirmative.

Your 9th interrogatory — “In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit the passengers immediately to enter the city?” I answer also in the affirmative, provided they are clean and labor under no contagious disease.

In answer to the 4th and 6th questions, I should say that, other things equal, the longer a vessel had been absent from a sickly port, the less hazard would there be of her introducing contagion. The term from the reception of the contagion into the system, to the beginning of the attack, varies in different contagious diseases. In smallpox, from six to twenty days, though in the larger proportion of cases, the invasion of the disease takes place in from ten to fourteen days after exposure to its contagion. If, therefore, a vessel had arrived from a port where smallpox existed, and her passage had been less than a

fortnight, though free from sickness on her arrival, the danger from the introduction of the disease by her crew or passengers, would not be passed. How long the seeds of fever may lie dormant in the constitution, is not satisfactorily determined. It should also be considered that certain goods or clothing, if kept confined during the passage, however long it may have been, might remain imbued with the contagion or infection of the sickly port; hence prudence would dictate that in all cases of vessels arriving from sickly ports in the hot season, such goods, and especially clothing, should, if practicable, be exposed and thoroughly aired before leaving quarantine. The length of time demanded for this, would, of course, depend on circumstances; and the condition of some vessels, arriving even from sickly ports, might be such as to admit of their coming immediately to the wharf. In deciding this point, the nature and cause of the disease to be guarded against, would be of important consideration. The powers of the health officer, as you will at once perceive, must here be permitted a wide latitude.

To the 11th interrogatory of your committee, I make answer, that an abundant supply of pure water, such as we have in the *Croton*, may doubtless, if judiciously regulated, be made to contribute, in no small degree, to the health of the city, and, in *my opinion*, (though we have at present no sufficient data on this particular question,) would secure it, in a measure, against yellow fever, and contribute to diminish its extension should cases of it occur. The management of the *Croton* water, so as to render it most subservient to the health of our citizens, demands a good deal of judgment, and is doubtless susceptible of yet further improvement.

In answer to the 14th and last inquiry of your committee—"What effect has the progress of medical science had upon the policy of enlightened governments in relation to quarantine laws?" I should say, judging from the absurd and useless restrictions imposed by many foreign governments, ranking as enlightened, and from the quarantine fooleries and absurdities that were enacted in our own country during the visitation of the malignant cholera — but little, *very little*. Science has but tardy action, when contending against popular errors and prejudices.

I have thus, gentlemen, answered the questions proposed to me, to the best of my judgment, and in as brief a space, as their nature and

importance would warrant. The facts, or data on which my replies are grounded, could not, of course, be presented without swelling this communication to an unreasonable bulk.

The inquiries of your committee in regard to imported contagion, have almost exclusive reference to that of yellow fever, but you are doubtless aware that there are other grave diseases from which the danger of importation by contagion is undisputed.

I am, gentlemen,

Respectfully,

Your obedient servant,

WILLIAM SWEETSER.

To Messrs. DAVID E. WHEELER,

CALVERT COMSTOCK,

REUBEN H. HINE.

Committee.

ANSWERS OF JAMES R. MANLEY, M. D.

New-York, Nov. 10th, 1845.

TO DAVID E. WHEELER, CALVERT COMSTOCK and REUBEN H. HINE, Committee.

Gentlemen — In answer to the questions proposed in your circular, on the subject of improvement in the quarantine law, I submit the following opinions : To

* *Question 1*, I answer, *it is not* without the concurrence of causes which operate in tropical climates, where the disease is *endemic*.

Question 2.—The causes which produce it are frequently imported in ordinary healthy seasons from *Havana, the Spanish Maine, and the West India islands* ; and the vessels from the above places, are liable to become the *foci* of infection to their neighborhoods, in the season of the year when our climate most resembles the climate of the *tropics*, viz : when heat, moisture, and putrefactive materials are present.

Question 3. — It ordinarily, nay always, occurs from causes existing on board the vessel. The cargoes, unless damaged, have, in my opinion, little agency in producing the disease ; from passengers there is *no danger* ; the ship ! the ship ! in *ninety-nine of a hundred cases*, is the cause.

Question 4. — It is NOT prudent to permit vessels, at any time during the summer or two first autumnal months, to come to the city from ports where sickness prevailed at the time of sailing. The same objection does not apply to cargo, if properly ventilated and *sound*.

* See Circular and Interrogatories.

Question 5. — Vessels arriving from any and every healthy port, ought not to be permitted to come to the wharves on arrival; because, the disease may be generated at sea, or at least the causes of it, and on the *coast of Africa*, it is always so generated. And it has happened in this port, that vessels, during the whole voyage, have been apparently healthy, and on *breaking bulk* and discharging cargo, have instantly become sickly, and given disease to *lightermen* and others who have had communication with the said vessels.

Question 6. — Length of time occupied in the passage, if *in warm latitudes*, would, in my opinion, aggravate the danger rather than have an influence in diminishing it.

Question 7. — “Is it prudent,” &c. I answer YES, if the vessel has not been in any tropical or sickly port since her cleansing.

Question 8. — Cargoes of merchandize, after proper ventilation, in my opinion, may, with safety, be landed in the city, if *in a sound state*; such ventilation, however, should be continued for at least twenty days, in the case of vessels, on board of which deaths have occurred from fever during the voyage. No merchandize, however, requires this ventilation, unless the goods themselves, or their packages, consist of wool, cotton, hemp, flax, fur or hair, or other bibulous materials.

Question 9.—No danger can result to the city from passengers in health at any time entering it.

Question 10.—They will not generate yellow fever, nevertheless, their putrescency will aggravate disease from other sources.

Question 11.—I do not think that the supply of Croton water, if it were ten times as much as it now is, would serve any purpose in preventing the spread of disease, unless applied to cleanse the streets, to which object, we know it is not applied; to do good, it should be made to wash the gutters every day, and putrescent materials of every kind, should be removed by authority. If pestilence should unfortunately happen, then, perhaps, we would learn its uses, because fear would then become our teacher, and I am inclined to believe, that nothing else, but a law of necessity which such a contingency will impose, will enable us to estimate its benefits.

Question 12.—The Bulam fever is yellow fever in its most malignant aspect, and it *originated there*.

Question 13.—Yellow fever, is NOT personally communicable, but the causes are atmospheric, and it is thus *infectious*.

Question 14.—So far as I know, it has modified and improved quarantine laws, without impairing their efficiency, but local causes, and high latitudes, have much to do with the answer to this question.

Yours,
Very respectfully,

JAMES R. MANLEY.

ANSWERS OF WM. P. HORT, M. D.

OF NEW ORLEANS.

New-Orleans, August, 1845.

D. E. WHEELER, Esq.

Dear Sir—I have received your favor of the 6th inst., and it will afford me pleasure to reply to the proposed interrogatories of the committee, which have been forwarded to me. I shall consider them in order, one by one.

QUESTION I. *Is the yellow fever of domestic origin at the port of New-York?*

It is my opinion that the yellow fever was once of domestic origin in your city.

There is no higher authority than Dr. Rush on this subject; he expresses himself in the following forcible manner: "The year 1795 furnishes several melancholy proofs of the American origin of yellow fever; all the physicians of *New-York* and Norfolk agree in its having been generated in their respective cities that year."

In 1805, the yellow fever again prevailed in New-York; Dr. Rodgers, the health officer at that time, proves that it must have been of domestic origin; for he writes to Dr. Rush, "I most sincerely deplore the state of our city. What do people now say of the origin of the disease? You may state that not a single vessel, on board of which a person has been sick with fever, or on board of which any person has died of the disease while in the West Indies, or on the voyage home, has ever gone up to the city. *There is not a shadow of proof that can attach to the health officers or to infected vessels, this season.*" I believe that the fever of 1822 was also of domestic origin; for, the vessel that was supposed by some to have brought it to the foot of Rector-street, had performed quarantine; the fever was confined to an in-

fectured district, beyond the bounds of which no case of yellow fever originated, or was communicated, although the circumstances were most favorable to the propagation of an imported, or of a contagious disease.

Since 1822, there has been no yellow fever in New-York, and there has been none in Charleston since 1832. I am of opinion, that the cities on our Atlantic coast are no longer within the yellow fever region. This, probably, has been brought about by general improvements in the cities, and greater attention to cleanliness particularly. It may, also, be in part owing to the changes of climate which we can observe, and to changes in the atmosphere which may happen, but which we cannot explain.

QUESTION II. *Is the yellow fever imported by sea into this port, and if so, at what seasons, and from what countries or ports is it likely to be imported?*

As I believe the yellow fever to be a disease of local origin, of which I think I have given abundant proof in the article on quarantine; and as I am of opinion that New-York is no longer in the yellow fever region, I do not think that fever will prevail there again. If so, you have nothing to fear from an imported fever, which I shall endeavor to show in answering the next interrogatory.

QUESTION III. *If imported, in what way is its importation most likely to occur, by vessels, cargoes, or passengers, and from which source is there the most danger?*

Unless the yellow fever is a contagious disease, passengers could not communicate it. An atmosphere capable of producing yellow fever, might exist in the hold of a vessel, or in the cargo, but in either case it would be fatal only to those who would be exposed to it on board the vessel. See the case of yellow fever originating on board a British frigate, at page 9 of my pamphlet, and the case that occurred at Bayou Sara in 1817, when goods conveyed it from New-Orleans, page 3.

The first case is an illustration of the fever originating in the hold of the vessel, and the second refers to the cargo.

QUESTION IV. *If a vessel arrive from a sickly port, without any sickness on board during the passage, and on inspection by the proper*

officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection—if not, how long after?

Under such circumstances, I think there would be no risk or danger incurred by permitting a vessel to come at once to the wharf.

QUESTION V. *If a vessel arrive from any port, in whatever latitude, such port being healthy at the time of the departure, without any sickness on board during the passage, and on inspection by the proper officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection?*

I believe that the most strenuous advocate of quarantine laws would not hesitate to say, in this case, that the vessel might proceed immediately to the wharves, without the least danger being incurred.

QUESTION VI. *Would the length of time occupied by the passage from port to port have any effect upon the answers to be given to the two last questions?*

Only in the case that a contagious disease, such as small-pox, prevailed at the port from which the vessel sailed; and that owing to shortness of distance, or a very rapid passage, sufficient time had not elapsed for the disease to declare itself on any of the passengers or crew. But the judgment of the health officer would always be sufficient under such circumstances.

QUESTION VII. *If a vessel arrive from Europe, having had no infectious or contagious disease during the voyage, and the passengers on her arrival are all healthy, is it prudent to allow the vessel with her passengers to come immediately to the city?*

I cannot see the least possible objection, but as in the former answer, it might be left to the decision of the health officer.

QUESTION VIII. *In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit their cargoes to be brought to the city; and if so, ought there to be a discrimination as to the articles, and what articles of merchandize are most likely to communicate the disease?*

If a vessel cannot come with safety to the wharves, neither can the cargo. A cause of disease may exist, or be supposed to exist, but who could decide whether it were attributable to the vessel or to the cargo? If a contagious disease exists on board a vessel at the time of her arrival, or when there is reason to believe that her cargo, or any part of her cargo, is so damaged as to be capable of engendering a contagious disease, in that case the vessel should be unloaded, she should be thoroughly cleansed and fumigated; the sound part of the cargo should be separated from the unsound, and be exposed for a reasonable time to the air and the sun. With regard to discrimination as to the articles, more suspicion would attach to those of a perishable nature, or subject to chemical change, than to others of opposite qualities.

QUESTION IX. *In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit the passengers immediately to enter the city?*

If the passengers are healthy, they can have no disease to communicate; and if they are sickly, they can only communicate a contagious disease. Unless, then, a disease, known to be contagious, exists among the passengers, there is no reason why they should not be permitted to enter the city immediately.

QUESTION X. *Will fruits, vegetables or animal matter, while in a vessel, ORIGINATE the malignant yellow fever; and if so, from which is there the most danger?*

Dr. Rush attributes the yellow fever of 1793, in Philadelphia, to damaged coffee; in the immediate neighborhood of which, he says, the first case occurred, and where the pestilential odor was much complained of. In the article on quarantine, I have fairly traced the fever to putrid cotton seed in Florida, (see page 182, in the essay annexed.) If, then, putrid coffee, or putrid cotton seed, can produce yellow fever on land, I think they would be much more likely to produce it when confined in the hold of a vessel, and secluded from fresh air. I know of nothing worse in a state of putrefaction than the two articles spoken of. But I do not believe that anything would originate the malignant yellow fever in a vessel, unless she were either within, or very near to the limits of the yellow fever region; and a fever so generated would only affect persons who might be on board during the voyage, or who might come on board after her arrival. It could not spread

further, unless it were a contagious disease. The effects then of the yellow fever in such a case, would be as local and as limited as the cause of the fever.

QUESTION XI. *Has the introduction of the CROTON WATER rendered the city of New-York less liable to be visited by the yellow fever; and will it prevent its spreading should cases of it occur?*

No doubt, the introduction of the Croton water has rendered New-York much less liable to be visited by yellow fever, or any other kind of malignant fever; and its agency in preventing the spreading of yellow or malignant fever, would amount to about the same thing. The two great conservative principles of health are, pure air and pure water. Where they are found, no malignant fever can exist. In some parts of the southern country, very malignant fevers, or slowly wasting disease, can be referred to bad water alone; and abundance of pure water will go far to counteract the influence of an impure atmosphere.

QUESTION XII. *Is the malignant yellow fever the same as the Bulam fever on the coast of Africa, and does it originate there; and if prevalent in any other place, is it modified by climate?*

Whenever the malignant yellow fever prevails within the limits of the yellow fever region, it is one and the same fever, although it may be modified by climate, and local and other causes.

The same causes will, under the same circumstances, produce similar effects all the world over; therefore, whether at Bulam, on the coast of Africa, or in Siam, in the Burman Empire, or at Batavia, in the island of Java, or in corresponding latitudes in our western hemisphere, the yellow fever may originate, because we find the same local causes existing in every instance to produce disease.

QUESTION XIII. *Is the yellow fever communicated by personal contact, or by an infected atmosphere, or both?*

The facts presented by Dr. Beck, in relation to the yellow fever of 1822, in your city, are, of themselves, sufficient to settle the question of contagion for ever; for, the yellow fever cannot be non-contagious at one time, and contagious at another. In short, the evidence that yellow fever is not a contagious disease, and, therefore, cannot be

communicated by personal contact, is overwhelming. I do not know a single physician in this city who believes it to be contagious, and the public, with very few exceptions, is of the same opinion; and it would be difficult to find a physician of a different opinion at Havana, Vera-Cruz, in the West India islands, or, in short, in any part of the world where yellow fever prevails. We know of no malignant fever peculiar to tropical climates that is contagious. They all result from impurity of the atmosphere, occasioned by exhalations from the surface of the earth, or, in some cases, from certain plants, as in the islands of Ceylon and Madagascar, and on some parts of the coast of Africa; and all who may take the fever, take it in the same way from the infected atmosphere. But, on this subject of infected atmosphere, it is all-important to entertain correct views. The general opinion seems to be, that an impure atmosphere may be imported by a vessel arriving from a foreign port, where yellow fever is raging, and that this imported atmosphere can infect and render impure what was previously a pure and healthy atmosphere. In my opinion, there can be no greater philosophical absurdity. It seems to be literally impossible. The quantity of impure atmosphere imported, must necessarily be small, and the moment it would begin to pass off from the vessel, it would become so diluted by diffusion in a pure atmosphere, as to lose all distinctive character, and be incapable of producing disease. But, supposing the atmosphere of a city not to be altogether pure, then the imported atmosphere might, as some suppose, produce a chemical change in the atmosphere, but then the original cause of the fever being changed, the atmosphere could not produce the same disease. I do not, however, believe that this subject is understood. My opinion is, that yellow fever cannot be produced by an imported atmosphere, except on board the vessel; and that an atmosphere can only become infected from local causes, existing at the place where it produces disease.

I will attempt a further illustration of this point. Prior to 1832, the yellow fever prevailed frequently at Charleston, South Carolina; at the same time there existed a very different disease, called the country fever, in the districts adjacent to the city. Both these diseases were of local origin; an acclimated citizen of Charleston could not go with safety from the city into the country, for he was almost certain of taking that peculiar fever, which, to strangers, generally proved fatal; and a citizen, acclimated in the country, did not dare to

visit the city during the prevalence of yellow fever. But the yellow fever was never carried to the country, nor was the country fever ever carried to the city. These facts prove, first — that neither disease was contagious ; second — that both were of local origin ; and third — that the impure air of the city was not carried to the country, nor could the atmosphere of the country be conveyed to the city, so as to infect the atmosphere there.

QUESTION XIV. *What effect has the progress of medical science had upon the policy of enlightened governments in relation to quarantine laws ?*

In the progress of medical science, it has been made apparent to enlightened governments, that diseases that were once very fatal in certain latitudes, have entirely disappeared from them ; it has, also, been shown how this great object has been accomplished. It was, by ascertaining first, what were the causes of disease, and then, what measures were necessary to remove those causes. Moreover, medical science has already convinced some enlightened governments, and seems to be in a fair way to convince all, that quarantine laws may now be dispensed with ; and that pestilence can be better averted by judicious police regulations, enforcing cleanliness as far as possible, and removing every known cause of disease. Quarantine laws had their origin during the dark ages, and they should have passed away with those ages on the revival of civilization. The plague was once a common disease in Great Britain, carrying off immense numbers of victims ; and was particularly fatal in the city of London, until the great fire of 1666, which destroyed all the old and filthy part of the city, put a stop to it. Nobody supposes that the plague could now be generated in the latitude of Great Britain ; but Grand Cairo is as much subject to it now as it ever was. And why ? Because an iron despotism, and religious fanaticism, have paralyzed the energies of mind, and arrested the progress of medical science. In reading the accounts of the condition of the masses, by persons who have recently travelled in Egypt, it is only a matter of astonishment that disease is not more fatal than it actually is, and that any can escape in such a vitiated atmosphere. With the same filth in New-Orleans, the city would soon be depopulated. Grand Cairo and New-Orleans are in the same latitude, and very similarly situated ; but New-Orleans is situated on the alluvial bottom of a larger river than the Nile, and, as far as heat, and moisture, and exhalations from the soil may be con-

cerned, this city was once as much exposed to pestilence as Grand Cairo. But, while nothing has been done in Egypt to remove those causes which vitiate the atmosphere and engender pestilence, let us see what has been done here. Twenty years ago, only two streets, parallel with the river, were paved. In wet weather, the other streets were a perfect quagmire. In the back yards of the houses, there was only a thin crust of earth over an offensive black mud. At that time, most of the ground floors were almost in contact with the alluvial soil, and the back part of the city was low, presenting numerous pools of stagnant water. It was no wonder, under such circumstances, that a yellow fever atmosphere was generated. At present, the streets are paved. Yards are bricked, or flagged, or coated with asphaltum, which is also now generally used to coat the soil under the houses. The low parts, in the back of the city, have been filled up, and the wet swamp in the rear, has been completely drained; all filth and offal in the streets is speedily removed, and the gutters are washed every day. There remains much to be done, however, before we can feel confident that a yellow fever atmosphere can no longer exist here. A great change has certainly taken place in the health of the city, which has been commensurate with the improvements carried on by the corporations and by individuals. Since 1841 we have had no yellow fever worth speaking of, and I feel assured that it is in our power, if the authorities will only adopt the necessary measures, to expel it for ever. With a population of 125,000, of whom many thousands are unacclimated, for the last three or four weeks, about 50 have died per week, being in the proportion of one to 16,000. I doubt if this can be said of any other city in the Union.

But New-York, in regard to local advantages, has immensely the advantage over New-Orleans. And if we have made such progress in averting yellow fever, surely you can have nothing to fear.

But while quarantine laws are very burdensome to commerce, and harrassing to passengers, it does not appear that we can rely with any confidence on their accomplishing the end for which they are designed. According to Dr. Rush, the most rigid quarantine failed to prevent the importation of yellow fever into Philadelphia, admitting that it was imported, which the Dr. positively denies, and clearly proves. The same thing occurred in New-York, in 1805, according to Dr. Rodgers, the health officer, and in 1822, they again failed. Here, they have been for a long time abandoned, from a conviction that they were

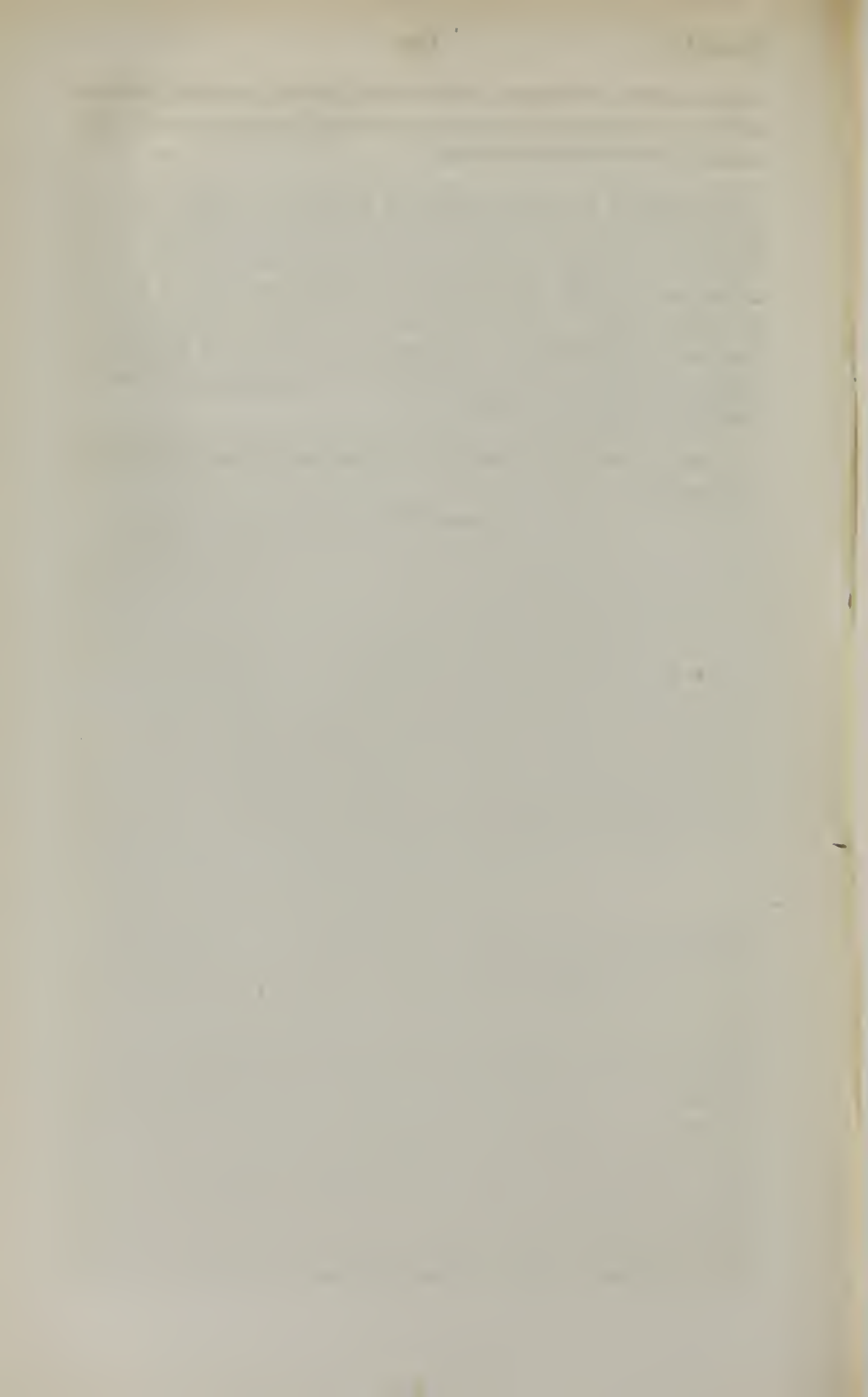
utterly useless. The press, in Paris and London, is calling for their abolition throughout Europe, and denounces them as a nuisance, dis-creditable to this enlightened age.

In conclusion, if there is a sufficient police in New-York, duly authorized to examine yards and stores, in every part of the city, where they suspect that there may be an accumulation of filth, or anything deleterious to health, and such be immediately removed; if there is no stagnant water; if the streets are well washed every day — you must have a pure atmosphere, and with the Croton water, I think you might safely dispense with quarantine laws, depending solely on the judgment of your health officer.

I send you one of my pamphlets, for the convenience of reference, and remain,

Respectfully, yours, &c.

WM. P. HORT.



VIEWS OF DR. HORT.

SUBMITTED TO THE MEDICAL SOCIETY AT NEW-ORLEANS.

The following additional views of Dr. Hort, were submitted in February, 1845, to a Medical Society in New-Orleans.

The subject of quarantine laws is presented to the society for consideration, for the following reasons :

1. The public press has on various occasions called for the establishment of quarantine laws, in this city.

2. Acts of the Legislature have been passed at different times, establishing such laws, which, however, proved to be unavailing, not on account of the laws being defective, but because public opinion was opposed to them, influenced and sustained by a large majority of the medical profession.

3. About a year ago, a respectable Medical Society, in this city, brought the subject before the Legislature.

4. A talented Professor of the Medical College has published a pamphlet in favor of quarantine laws, in which he has distinguished himself by the diligent researches that he has made, and the very able manner in which he has arrayed authorities in their favor.

5. The physicians in the towns situated on the Mississippi river appear to be generally in favor of such laws.

6. It is a subject of great importance to a commercial city like New-Orleans. Quarantine laws injure alike the ship owner and the shipper ; they are particularly onerous to passengers ; they would
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destroy our trade with Mexico, Havana, the West India islands and South America, from May to November; and during this period, it is almost the only trade carried on in New Orleans.

Yet if it can be shown conclusively, that such laws are necessary, then should individual give way to the general welfare.

My attention was called to this subject twenty-two years ago, having been a student in the rival colleges of New York and Pennsylvania. In the former, Dr. Hosack, the distinguished professor of the Theory and Practice of Medicine, contended that yellow fever was an imported disease, and contagious, and consequently that quarantine laws were necessary. And in the latter school, the no less learned and talented professor Chapman maintained the very opposite doctrines.

Without any improper motive to influence me, I came to the conclusion that the weight of evidence was in favor of the Philadelphia school; yet so strong were the facts, and authorities, and reasoning, on both sides, that I determined to suspend my final decision until my personal experience and observation should convince me.

Quarantine laws had their origin during the crusades. The plague was supposed to have been brought from Palestine by the crusaders, and introduced into the European ports on the Mediterranean. From the derivation of the word, the system would appear to be of Italian origin, it being derived from *quarantina*, alluding to a detention of forty days.

The system is then comparatively of modern origin. The expediency of such laws in the countries whose shores are washed by the Mediterranean sea will not now be disputed. My remarks will be confined to the questions of the contagiousness and importation of yellow fever, on which the expediency or necessity of quarantine laws in Louisiana alone depends. Of the origin of diseases called endemic, or those of local origin, and confined to a certain section of country, (as the plague in the Grecian camp, so beautifully described by Homer,) and of epidemics, which travel from country to country, and from conjinent to continent, and from one hemisphere to the other hemisphere, apparently controlled by no fixed laws, we know nothing more, strictly speaking, than what was known in the time of Hippocrates. That eminent ancient physician was a close observer of na-

ture; he had traveled much, and had no doubt witnessed many endemic and epidemic diseases; and yet in a chapter which he devotes to the subject, he declines to assign any natural cause, and humbly ascribes the whole work to the “*το Θεον*”—the divine spirit or agency, which we should call the God of Nature.

In fact no subject is involved in greater obscurity than the doctrine of miasm. Precisely as the endemic fever was produced in the Grecian camp by the fierce action of the sun's rays on the marshy ground between the Tanais and Scamander rivers, where the Grecian army was encamped, do we see disease engendered under the same circumstances, in many parts of our country; we can perceive the connection between the cause and the effect; we can often trace the most formidable diseases to local causes; we smell something that is extremely offensive and peculiar, which sometimes strikes us like electricity, producing nausea and even vomiting, and a sense of tension round the base of the brain; and we are sensible that the nervous system has sustained a severe shock by the vertigo, trembling, and loss of physical power, that we experience. But chemistry has as yet detected no noxious qualities in this offensive air; whatever miasm is, it has hitherto eluded the most delicate tests and experiments. Having premised these remarks, I shall proceed to the consideration of what is called the importation of yellow fever. In our classical studies we have read of nations contending for the honor of their country having given birth to some distinguished individual, but everywhere the paternity of yellow fever seems to be disclaimed. From the United States it is traced to the West India islands, thence to the coast of Africa, and thence to Siam, where some are of opinion that it originated. But no doubt, should we prosecute our researches in Africa and Siam, we would find persons there who would tell us that it was imported from some other parts of the world, and so on, until we should find ourselves revolving in a circle *ad infinitum*.

If it is maintained that a disease originates in a certain country, and causes or circumstances are pointed out, which are supposed to produce it, then, wherever we find in other places and parts of the world the same causes or circumstances, we cannot see why the same disease should not be produced in the one, as well as in the other place. If such causes however do not exist, the disease cannot exist, unless the doctrine of contagion be admitted.

Infectious air from the hold of a ship, or from clothes or goods, or from a trunk, might destroy a few individuals exposed to its influence ; but it could not go far ; it would soon be diluted so as to become innocuous ; or should it become modified in some way in an impure atmosphere, then it would no longer be the same disease. One fact is here introduced to illustrate this position. In 1817, a barge left this city with goods for a store keeper at Bayou Sara ; during the passage up the river, and shortly after the arrival of the barge, every one of the crew and passengers died of yellow fever. The goods were landed and conveyed to the store ; and the store keeper who opened the packages, although he was warned not to do so, sickened and died of yellow fever ; but no other person in the neighborhood contracted the disease. The whole subject is then narrowed down to the question of contagion. It is asked ; why do we hear nothing of the yellow fever having prevailed on this continent, and in the West India islands, before they were discovered and inhabited by Europeans ; why then, would *we* ask, do we hear nothing of bilious and congestive and typhus fevers, and divers other diseases, unknown to this continent, anterior to that period ? Will any one say that bilious and congestive and typhus fevers are imported ? Yet there was a time when they were no more known on this continent than yellow fever.

Disease follows in the track of civilization, not carried by the people from one country to another, but developed by the great physical changes brought about by industry, and agricultural pursuits. The surface of the earth, once sheltered from the sun's rays by luxuriant vegetation, is laid bare to the action of those rays ; the surface of the earth is turned up by the plough, exhalation and evaporation follow ; vegetable matter is decaying in large quantities, or large cities are built, and people become crowded together within a very limited space, and filth and offal accumulate. Then marshes are exposed, and great changes must be going on in the atmosphere near the surface of the earth ; and is it at all strange, that under such circumstances, new diseases should be developed ? But the yellow fever is said to have been imported from Siam ; in other words, it is affirmed that the fever originated in Siam, and thence spread gradually to all parts of the world in both hemispheres, where it has since prevailed. What is there, however, in Siam, as far as we can see, to produce yellow fever, which we do not find in the corresponding latitude in the Western hemisphere ? It is a genuine yellow fever region, including the greater

part of the West India islands, Vera Cruz, Chagres, Carthagena, and lying between the 10th and 20th degrees of north latitude. The valley of the Ganges, the centre of the cholera region, lies between 20 and 30 degrees north ; and in the western hemisphere, in the corresponding latitude, we find New-Orleans, Havana, and all the Mexican ports and West India islands, not included in the first range. The most unhealthy part of the African coast, from the equator to 10 degrees north, corresponds to that portion of country in South America, situated between the mouths of the Amazon and Orinoco rivers, including Cayenne, Surinam and Guiana, a most decided yellow fever region. New-Orleans and Grand Cairo are precisely in the same latitude, and similarly situated ; the one being on the bank of the Mississippi, and the other on the bank of the Nile, and both on alluvial soil, and in a hot climate. Both the northern and southern shores of the Mediterranean, between the 30th and 40th degrees of north latitude, are included within the region of plague ; and in the same latitude in this hemisphere, lies all our seaboard, and southern cities, from New-Orleans nearly to Sandy Hook. What is there in Siam, or on the African coast, calculated to produce malignant fever, that we do not find in the low marshy pestilential country lying between the Amazon and Orinoco rivers ? What is there at Alexandria or Grand Cairo, or Smyrna, to produce disease, as far as location, latitude, and heat and moisture are combined for such cause, that does not equally exist on the bank of the river, where the city of New-Orleans stands ? In looking over the map of the world, we see in the countries north and south of the equator, but chiefly north as far as 49 degrees, three great regions of disease ; first, of plague ; secondly of cholera ; and thirdly, of yellow fever. If all the circumstances were precisely the same in these three regions, only one of these diseases would probably exist ; but as there is some modification in the circumstances, there is also a variety in the character of the pestilence engendered.

There was a time when neither the African fever, nor that supposed by some to have been imported from Siam, had been heard of ; but as the enterprise of Europeans, under the impulse of increasing civilization, carried them into all parts of the world, and induced them for commercial purposes to make settlements, in due process of time, the peculiar diseases of the climate became developed ; and therefore we would lay it down as a general rule, that under the same or nearly the same circumstances, we shall find the same or very nearly the same diseases, without going to the trouble of importing them.

To every physician who has had an ample experience in the Southern States, many illustrations will recur, of the development of malignant disease. There have been repeated instances of families residing for years on a plantation, enjoying perfect health, yet in cutting down a belt of timber that intervened between the dwelling house and a mill pond or some marshy ground,—malignant fever has almost immediately occurred, carrying off half the family, and driving the other half away. But to illustrate it on a larger scale, we will advert to what has occurred in Italy. The Pontine marshes are about 18 miles from Rome, in a north-east direction; formerly, when the population of Rome consisted of two millions, they were protected from the Pontine marshes by an immense forest, but since the timber has been cut down and the Campagna di Romagna completely laid open, the population of Rome has been reduced to about forty thousand, and whenever the wind blows from the north-east for four or five days, the most malignant fevers appear, from which no one is exempt. All this, however, may be admitted as to malignant fevers generally; but we have to prove that yellow fever is developed and generated in this country, or we must admit that it is an imported disease. In the town of Wilmington, in North Carolina, there is no intercourse with the yellow fever region from the end of May until November, and very little at any time, yet about the time the rice fields are drained, cases of yellow fever often occur amongst the unacclimated; and I have known entire crews of vessels from New-York, or some other northern port, arriving at that season, to be cut off in seven or eight days. I have seen the yellow fever in Florida fifty miles from the Gulf, where it could not have been imported, where the black vomit was forcibly ejected five or six feet, and where it could be traced to a local cause on the plantation. In the lower part of the house-lot of one of my neighbors, a small pond was formed by the trampling of stock, into which a quantity of cotton seed had been washed by heavy rain. The negro cabins were on one side of this pond; some nearer to it than others; the dwelling house was distant about one hundred yards. At the end of August, 1825, the yellow fever appeared, attacking both blacks and whites, and no doubt the mortality would have been great, if the gentleman had not promptly moved all hands to the pine woods which were close at hand. I was sitting up one night with three of the white family, expecting one of them to die before the morning, when the night being very warm, the thermometer at 92 degrees, I opened a window in the direction of the pond to admit

a little fresh air, and never shall I forget the pestilential blast that came from the pond. It produced nausea and vomiting, and the sensation of a band of iron round the head. Three days after I had the yellow fever.

In the summer of 1826, some men died of yellow fever in Apalachicola Bay. They had come direct from Baltimore, bringing out a large stock of goods to establish a store in the interior of the country. At that time, there was no settlement in Apalachicola, and no intercourse with the West Indies, or any other place, from which the disease could have been imported.

There is such constant intercourse between this city, and the Mexican, West Indian, and South American ports, that there always will be a vessel here from one of those ports, about the time that yellow fever may occur, and if the disease is imported one year, why not every year? for the yellow fever prevails annually at these foreign ports; there is constant intercourse with them during the summer, and, on an average, about the same number of strangers here who are unacclimated.

In 1839, the first case of yellow fever occurred in the mint; a young man of the name of Clark, a machinist, died of the disease about the end of July. That year, at the foot of Esplanade-street, all the filth of the city, below Canal-street, was thrown over the wharf into the river; so long as the river was high, it was immediately carried off by the rapid current; but about the first of July, the river began to fall, and very soon a most disagreeable smell was perceived whenever the wind blew from that direction. It forcibly reminded me of the pestilential odor from the pond in Florida, of which I have just spoken. On going to the end of the wharf, I found that the bank was exposed; and the vegetable remains, dead animals, and every kind of filth thrown on it, appeared to be a living mass of maggots. From Hospital street, two squares above, to Manderville street, three squares below, every unacclimated person residing on the front levee, without respect to age or sex, died. A puff of air coming from that spot produced nausea and vomiting, even in acclimated persons. In the mint, two officers and several of the workmen died, and not one unacclimated person escaped the disease.

It is remarked, that the yellow fever generally makes its appearance near the bank of the river, and from this circumstance it is infer-

red that the disease is imported. If we recollect the immense batture that is forming in front of the city ; that fresh alluvial deposits are made every year, and that when the river falls rapidly in summer, an immense surface, extending for miles, covered with vegetable and animal remains in a state of putrefaction, is exposed to the action of the sun, it will no longer appear surprising that the fever should originate on some part of the alluvial bank, and that unacclimated persons exposed to its influence, whether near the levee, or on board the shipping, should be the first to suffer. On the contrary, it is the very result we should predict from the facts of the case. A fatal yellow fever desolated the town of Woodville last year. It may be well to remark, that it is not one of the river towns ; it is about twenty miles from the river, near the Louisiana line. Some vague reports stated that this fever was imported from Natehez ; there was, however, no yellow fever in Natehez last year, and in this city it was sporadic and not epidemic ; for, of a population exceeding one hundred thousand, only one hundred and forty-eight persons died of yellow fever, although there was no want of subjects. Happily for the cause of truth and medical science, this subject was effectually put to rest by the report of Messrs. Valletti and Logan, two distinguished physicians of this city, who visited Woodville while the disease was raging. They conferred freely with all the physicians of the place, philosophically examined and weighed every circumstance, and came to the conclusion that the disease could not have been imported, and that it was of domestic origin. Proof of the local origin of yellow fever in Louisiana is most abundant ; one or two cases, however, will serve for illustration. In 1817, there were three boats running on the river, but they seldom visited the city during the sickly season. One, however, ventured down that year ; two gentlemen are now living who were on board that boat ; the yellow fever broke out amongst them before they arrived at New-Orleans. In 1819, the yellow fever carried off a whole family at Bayou Sara ; the disease was traced to a quantity of putrid bacon, exposed in a cask in the back yard. Prior to this family being attacked with the disease and destroyed, no case of yellow fever had occurred there ; nor did any other case occur, for the cause was immediately removed. In summing up the account of the yellow fever in 1793 in Philadelphia, Dr. Rush observes : " I shall resume this interesting discussion in another place, in which I shall mention a number of additional facts, not only in support of the domestic origin of bilious yellow fever, and of its not spreading by contagion, and, of

course, of its being impossible to import it." At page 43 of that account, he attributes the fever to damaged coffee, in the immediate neighborhood of which, he says, the first case occurred, and where the pestilential odor was much complained of. The greater part of the persons in that neighborhood died, (145.) Is there not a remarkable similarity between this case and the case of 1839, in this city?

Dr. Hutchinson, the inspector of sickly vessels, was directed by the Governor to ascertain the origin of the disease; he addressed letters to many of the physicians; and from their replies, he concurred in opinion with Dr. Rush, and concludes by saying, "that not having heard of any foreigners or sailors being affected, nor of its being found in any lodging-houses, it was not an imported disease."

There was, however, a difference of opinion on the subject, as we see by the letter of Dr. Redman, President of the College of Physicians, but who, says Dr. Rush, failed to designate the place from which the disease was imported, at what time it was introduced, and in what manner, in answer to certain interrogations in the Governor's letter.

Dr. Rush enumerates many other places north and south of Philadelphia, where a similar disease prevailed that year, but says, that in none of those places was there any suspicion of the disease being imported, or conveyed by an intercourse with the city of Philadelphia.

In 1794, he is still of the same opinion, and says, there is not a vestige of proof of its importation, p. 217. He further says, the year 1795 furnishes several melancholy proofs of the American origin of yellow fever. All the physicians of New-York and Norfolk agree in its having been generated in their respective cities that year. On one occasion the disease was ascribed to a vessel from St. Marks, and Dr. Rush observes: "I had attended nearly thirty persons, and upwards of a hundred had it before the vessel arrived." It is very probable that this would be found to be the case in every instance where the yellow fever is supposed to have been imported from a foreign port to one situated within the yellow fever region in this country. In this city, I have every reason to believe that it has ever been the case; for many cases occur which are never reported; and many are carried to their long home, said to have died of malignant fever, the physician not wishing to assume the responsibility of announcing the existence of fellow fever; or never having previously seen it, he may not recog-

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nize the disease. In the mean time, while this is going on, a vessel may arrive from Vera Cruz or Havana; and some unacclimated person being on board, either of the crew or passengers, may take the fever and die, naturally enough of yellow fever, produced as has been already suggested by the pestilential atmosphere on the bank of the river. Surely, such facts as these will not sustain the doctrine of importation.

In 1797, we find the College of Physicians at Philadelphia calling for a *more* rigid quarantine. Up to this time, then, by their own confession, there had been no quarantine law in operation that proved of much service. In 1798, we read, that "the disease was produced by the same causes which excited it in former years." We now come to the year 1799, and let us see what happened after a *more rigid quarantine* had been established. In July, says Dr. Rush, the city was alarmed by Dr. Griffiths, with an account of several cases of yellow fever in Penn street, near the water. The strictness with which the quarantine laws had been executed for a while, rendered this account incredible with many people, and exposed the doctor to a good deal of obloquy. At length, a vessel was discovered that had arrived from the West Indies on the 14th of May, one day before the quarantine law went into operation, from which vessel the disease was said to be derived. However, upon investigating the state of this vessel, it appeared that she had arrived with a healthy crew, and that no person had been sick on board during the voyage. That same year, 1799, the Academy of Medicine pronounced the disease to be of domestic origin, and the College of Physicians asserted it to be imported, because it had been imported in former years; a kind of reasoning which amounts to nothing at all. Of sporadic cases which appeared in 1800, Dr. Rush observes, "no one of the above malignant cases could be traced to a ship, or to a direct or indirect intercourse with persons affected with the disease."

While Philadelphia was thus visited with a few sporadic cases of yellow fever, it was epidemic in New-York, Providence, Norfolk, and Baltimore. In the last named place, it was publicly declared by a committee of health to be of domestic origin. In 1801, a number of cases of yellow fever appeared at New Bedford, Portland, Norwich, New-York, and in some parts of New-Jersey, and of Pennsylvania. In none of the above places, says Dr. Rush, could the *least* proof be

adduced of the disease being imported. In 1802, the fever in Philadelphia was referred to a vessel called the *St. Domingo* packet, but faithful and accurate inquiries proved that this vessel had been detained twenty-one days at the Lazaretto, and that not one of fourteen men who worked on board of her afterwards had been affected with sickness of any kind. The same year the yellow fever was epidemic at Baltimore and Wilmington. In the former place it was admitted by their board of health to be of domestic origin, and in the latter place, the same fact was proved by Dr. Vaughan. In 1803, the yellow fever was epidemic in New-York, Philadelphia, and Alexandria. In the latter place, Dr. Dick informed the public that it was derived from domestic putrefaction.

Speaking of the yellow fever of 1805, Dr. Rush remarks, an attempt was made to impose a belief that two cases of fever, traced to local causes, had been taken by contagion from a ship at the Lazaretto which had lately arrived from the West Indies, but a careful investigation of this tale proved that neither of the two subjects of the fever had been on board that, or any other ship then under quarantine. I shall conclude this valuable testimony of Dr. Rush, by transcribing a letter received from the health officer at New-York, dated 7th of September, 1805 :

“I most sincerely deplore the unfortunate state of our city. What do people now say of the origin of the disease? You may state that not a single vessel on board of which a person has been sick with fever, or on board of which any person has died of any disease while in the West Indies, or on the voyage home, has ever gone up to the city. There is not a shadow of proof, or of suspicion that can attach to the health officer, or to infected vessels this season.

J. B. RODGERS.”

Here, again, it appears, that the most rigid quarantine was of no avail, and when Dr. Rodgers asks, “what do people now say of the origin of disease?” it expresses clearly his conviction,—1st, that it was not imported, and was therefore of domestic origin; and, secondly, if imported, that the most rigid quarantine law availed nothing. I have now fairly and carefully traced Dr. Rush’s opinions of yellow fever from 1793 to 1805, and find no variableness, or shadow of turning. From beginning to end, he assigns the disease to domestic causes, and contends that it was never contagious. I think Dr. Rush was

wrong in calling the disease a bilious yellow fever. 'There is no connection between the two diseases ; they are essentially distinct. But as a patient observer of facts, with his strict adherence to truth, and his acknowledged abilities — his deliberate opinion on this subject, after an experience of thirteen years, is certainly entitled to great weight. There is, perhaps, no better evidence on record.

Some time during the war excited by the French revolution, a British frigate was despatched from England to re-enforce the fleet in the West Indies. Before she had entered any port, the yellow fever broke out, rapidly reducing her crew. The captain put in to Antigua. A medical board held a consultation. They directed her to be well fumigated and painted. She went to sea, and a second time the fever appeared ; again was she compelled to return to Antigua. She was then unloaded ; every thing to her very ballast was taken out of her ; she was again fumigated and painted, reloaded and sent to sea. In a short time the yellow fever appeared for the third time in this fated frigate. Necessity again drove her into port. The medical board could give no further advice. A physician who resided there, of the name of Musgrave, told the Governor that as the medical board confessed that they could do no more, he would, if permitted, point out the cause of the fever. His proposition was assented to. He had every thing taken out of the frigate, and then asked the Governor if there were any persons condemned to death in the island. There were ; these persons were ordered by the doctor to go into the hold of the ship and take off the inner planking next the keelson ; at the same time he cautioned all other persons not to expose themselves by looking down the gangway. Three officers disregarded his advice. The condemned felons descended to perform this work ; they ripped off the inner planking, but not one came alive out of the hold. The three officers who looked down the gangway and exposed themselves to the pestilential air, soon took the yellow fever and died. After this, not another case occurred on board during the time she was cruising in the West Indies. This fever could not have been imported, for it broke out at sea ; but the result of Dr. Musgrave's experiment is conclusive proof that it was of domestic local origin.

I have already spoken of the yellow fever region. On this continent it extends at present to the 30th degree of north latitude ; although it may occasionally pass beyond this limit. But the northern

limit is receding, and not advancing ; and this has been the case for a quarter of a century. Within this region, the intensity and type of the fever must depend on local circumstances. I have inquired of many persons from various countries, who have resided in Havana, if the yellow fever there varies much in its symptoms. All have replied, not generally, but there are some exceptions. These exceptions, after strict inquiry, were, I am satisfied, only a difference in intensity, owing to peculiarity of temperament and habits of life. But in this city, the type is sometimes inflammatory, sometimes congestive, and sometimes neuralgic. The fever, therefore, presents three distinct types, each one of which may vary in intensity in different cases.

If the disease were imported, it would only vary in intensity from the disease existing at the place from which it might be brought ; but as it varies here not only in intensity but in types without a corresponding change of type at Havana and Vera Cruz, the inference is, that our yellow fever is of domestic origin, governed by local circumstances. And how much stronger does this argument become, if we admit that the yellow fever is, as some contend, a specific disease, and contagious.

Another strong proof of the domestic origin of yellow fever, is the exemption of Creoles from that disease. This is a general rule — though I have heard of some exceptions. The belief, however, that the Creoles enjoy an immunity from their being born here, is universal with all the elderly French Creoles, and, in fact, with all the old inhabitants with whom I have conversed, and I am induced to believe that the cases of yellow fever said to have occurred amongst Creoles born here, were some other form of fever ; but, at any rate, they cannot overthrow the general rule. Now, if the fever is imported, why should they be more exempt from the attacks of yellow fever than citizens from adjoining parishes and adjoining States ? As bilious, and certain malignant diseases appeared early in Philadelphia early in the sickly season, prior to the developement of the yellow fever, so dysentery, diarrhœa and congestive fever appear in this city prior to a visitation of yellow fever. No body supposes the first mentioned diseases to be imported ; and why should one malignant disease be supposed to be imported more than any other malignant disease, when it is apparent that both arise from the same causes slightly modified ? The congestive fever, called by the Creoles, "*peste froid*," or cold plague, is a

more malignant, formidable, and fatal disease than the yellow fever, and if the one can be engendered in the country, why not the other ?

If the yellow fever is imported, then, according to a generally received rule, all other diseases should give way before it ; and if quarantine laws could prevent its reaching us, then, in all probability, would other diseases equally, if not more fatal, prevail ; for, like causes produce the same effects everywhere, under the same circumstances ; and here we are on an alluvial soil, with a dense population, of which a large portion is unacclimated ; and surrounded by swamps ; we have a most variable climate ; combined heat and moisture ; and every other element calculated to produce disease, which we see producing disease under the same circumstances in all parts of our southern country, and in all parts of the world.

I have stated that diseases are developed in the progress of civilization, yet, the more matured operations of civilization may control and modify diseases, and confine them within closer limits. The yellow fever, that about half a century ago, prevailed almost every year in the Atlantic cities, even as far north and east as Providence, has now, evidently, receded ; and New-Orleans, once almost in the centre of the yellow fever region, is now just on the northern limit. This great change has been brought about, not by quarantine laws, but by the energy of mind, directed to internal improvements, and by judicious police regulations. I shall have occasion to allude to this subject again. What did quarantine laws accomplish ? What could the concentrated power of a Russian emperor effect in arresting the progress of that malignant and fatal disease called the Asiatic cholera ? Many persons contended that it was a contagious and imported disease, and that its stern and silent march could be arrested by human legislation and effort. The valley of the Ganges, as has been before remarked, is the centre of the region of cholera. In Hindostan, however, it has set all laws and systems at defiance. It has driven the British troops from the plains to the mountains ; and again another year, from the mountains to the plains. In 1802 or '3, it left the valley of the Ganges, and carried death and destruction from the Himalayan mountains along the mountain ridges to the southern extremity of Hindostan. Dr. M'Arthur informs us, that there were official returns of more than one hundred thousand deaths that year, and the true number must have greatly exceeded this, from the difficulty that

always exists in that country of procuring correct returns. In 1817, it traversed Hindostan, Cabool, Affghanistan, Persia, and reached the Russian frontier posts in Asia. It then retired to the valley of the Ganges, and remained there thirteen years, when it started anew, traversed Asia, and while the Russian troops were guarding every road and pass on the European frontier, forming a complete "*cordon militaire*," the cholera broke out in Moscow, six hundred miles in their rear. It reached the latitude of sixty degrees north, swept rapidly over the continent of Europe, crossed the channel to Great Britain, and whilst we were felicitating ourselves that an ocean rolled between us and that dire pestilence, it appeared in Canada. The people of the Northern States were much alarmed; they adopted every measure that human ingenuity could suggest to prevent its ingress into the United States, but it passed at once from Quebec to New-York, and finally reached this city. Was this an imported or contagious disease? Did any quarantine law or military power, or human effort avail to arrest its onward progress for one moment? It came, passed on in its career of destruction, and disappeared like a hideous dream, exhibiting throughout the utter impotence of human effort and human skill to arrest its march of death. Having spoken of what may be accomplished by judicious police regulations, your attention is called to what occurred in Philadelphia, when the cholera was in the United States. Generally, it excited the utmost terror and alarm, and people were flying in every direction to escape its icy grasp. But the enlightened physicians of Philadelphia did every thing they could to calm the fears of the public. They assured their fellow citizens that the disease was not contagious; that fear of it created its greatest danger; that it might be greatly mitigated by the most strict observance of cleanliness; by maintaining a calm state of the mind, banishing every thing like fear, and by judicious police regulations. They succeeded in all their noble views, and the consequence was, that Philadelphia suffered less from the cholera than any other city or place in proportion to its population. A more successful effort to arrest or greatly mitigate disease, was never more apparent than in this instance. It was an intellectual and moral triumph.

Dr. Lind informs us that many persons escaped the yellow fever in Pensacola in 1765, by retiring to the ships which lay in the harbor, (p. 169, diseases of warm climates.) If the yellow fever was imported into Pensacola by the ships which were lying in the harbor,

how could the inhabitants find safety on board these ships? And yet this very case is cited in proof of the importation of the fever, and the doctrine of contagion. But Lind says : (pp. 36 and 124, diseases, &c.) They have very limited ideas of the history of yellow fever who suppose it to be peculiar to the East or West Indies. It was admitted to have been generated in Cadiz after a hot and dry summer in 1764, and in Pensacola in 1765 ; and at page 123, the same author says, this disease, the yellow fever, appears in all the Southern ports of Europe after hot and dry weather. The opinions of Dr. Lind are deservedly considered of very high authority. Perhaps no physician has seen more of the yellow fever, or has enjoyed the same advantage of noticing that disease in all parts of the world where it prevails. He was for many years at the head of the medical department of the British Navy, and was, therefore, no doubt conversant with the opinions of all the surgeons and physicians in the fleets, on this subject.

The same author in the same work, states that two British ships of war were cruising on the eastern shore of Africa. Being in want of wood and water, they repaired to a favorable spot for anchorage in the island of Madagascar. The captain of one ship, by the advice of the surgeon, sent the men detailed for that special duty on shore after sunrise, with orders to return before sunset. A large portion of them were attacked with highly inflammatory fever, which yielded promptly to bleeding and general antiplagistic remedies. The captain of the other vessel, also by the advice of his surgeon, sent the boats ashore after sunset, with orders to return before sunrise. In this ship, malignant yellow fever broke out, and was very fatal ; yet although in a ship of war of fifty or sixty guns, probably crowded with stores ; where under the deck the air can not be pure, and the weather intensely warm, the fever was not communicated to a single person in the ship who had not been on shore. Dr. Johnson, in his work on the diseases of tropical climates, states that a British squadron was blockading Batavia, in the island of Java. The vessels were lying off a small island, both high and dry, about two miles from shore. On the arrival of the sickly season, the admiral, fearful that the pestilential air from the land might reach his squadron and affect his crews, moved, contrary to the advice of every medical man on board the ships, to a low, swampy island, about six miles from the shore. It proved to be a grave yard. We now here read of a more malignant form of yellow fever. Scarcely one who went on shore even for a

short time, escaped the fever, and all died, who slept one night on the island ; but not a case was communicated in any one of the ships by the sick and dying, to those who had not been on the fatal island.

After such cases as the two foregoing, how can it be believed that the yellow fever is a specific and contagious disease ? We have seen it of local origin in the island of Madagascar, where the cause only operated at night ; and in the vicinity of the island of Java, where it operated at all times ; but in neither case was it communicated from person to person ; exposure to the pestilential air was necessary to contract the disease. This establishes its character as a miasmatic endemic—a form of disease no more imported, or contagious, than congestive, bilious, and malignant intermitting fevers.

When my attention was first turned to this subject, more than twenty years ago, I was forcibly impressed with the fact, that the most strenuous advocates of contagion, and the importation of yellow fever, and quarantine laws, were physicians who, for the most part, had never seen a case of the disease, or whose experience was very limited ; while on the other hand, the opinions of the medical men whose experience had been ample in tropical climates, was almost uniformly opposed to the doctrines of contagion and importation. And since that period, I have seen nothing to controvert the fact ; on the contrary, it has been abundantly confirmed. In discussing the question of the importation of yellow fever, that of contagion had been occasionally introduced ; it is, however, necessary to give that branch of the subject a full and distinct consideration.

During the summer of 1822, while pursuing my medical studies in the city of New-York, I met with the following report in one of the reviews published in that city. It was the report of a French physician, who had been sent from Paris to visit all places where the yellow fever prevailed, to collect facts, in order that the question of contagion or non-contagion might be decided. The yellow fever was raging in one of the French West India islands, either Martinique or Guadaloupe. The hospitals were filled with French soldiers ; the disease was extremely malignant. He introduced the blood of one of the worst subjects into his veins ; at another time he inoculated himself with black vomit ; he lay quite naked for four hours in bed between two soldiers who were dying of the fever ; and his body was all the time wet with the clammy perspiration of death. Not satisfied

with these experiments, he swallowed a wine glass full of black vomit. He did not contract the disease, though his system was considerably disturbed by such bold and singular experiments. After visiting a great many places, and collecting a vast amount of facts, and recording the opinions of practising physicians, he decided that there was not a shadow of proof of the contagiousness of yellow fever; and that the practising physicians universally disbelieved it

When the yellow fever broke out in 1822, in the city of New-York, I happened to be boarding within the infected district; and being a regular attendant at the hospital, I had an opportunity of seeing and hearing all that was going on. Whatever was the origin of that fever, which I shall not stop to discuss here, although I am persuaded that it was of local origin, it commenced in Rector-street, a small street extending from Broadway, alongside of Trinity church-yard, to the North river. Thence it gradually spread, in different directions, until it formed an infected district, bounded by a line extending from river to river, just at the commencement of the Park, where the Astor house now stands, and including within that line, all the city down to the battery. Why it stopped there, no one could ever tell—but it is a fact favorable to the opinion of its domestic origin, and difficult to be accounted for on the principles of contagion and importation. All who had the disease, took it in the infected district. Not a single case could be found that originated out of that district, although every effort was made by Dr. Hosack, and other physicians, who believed it to be contagious, to find such a case. Dr. Townsend, who contended for the importation of the disease, notwithstanding that the vessel said to have brought it from Havana, had regularly performed quarantine at Staten Island, did not, however, believe it to be contagious. Amongst many cases cited, to prove that it was not contagious, the doctor states that he attended a man who had taken the fever in the infected district; that this man had a large family; that they all occupied a cellar, which was crowded, badly ventilated, very dirty, and where, in short, everything was combined to favor contagion; yet, although the disease was very malignant, and the man died, no other occupant of the cellar took the fever.

Dr. Beck, (see appendix to Gregory, p. 653,) says: "During the prevalence of the fever, six persons lay sick with it at Greenwich, a village about a mile from the city. All of these had contracted the disease in the infected district: five of the six died there. In no in-

stance did they communicate the disease to physicians, nurses, attendants, or friends. To give additional weight to this fact, it should be recollected that to this place had been transferred the seat of business; that, in consequence of this, almost all the merchants of the city had retired to it, and that to accommodate them, hundreds of temporary buildings had been erected. From this influx of inhabitants, it may naturally be inferred, that the village was crowded to excess; and from this circumstance, as well as the want of comfortable accommodations, everything seemed favorable to the propagation of the disease. Still, although a number of very decided cases of the fever were carried to this place, lay sick, and died, it was not, in a single instance, communicated."

From the official returns of Dr. Bailey, the health officer of the port, it appears that seventy persons, sick with the fever, were sent down to the Marine Hospital on Staten Island. Of this number, thirty-seven died, of whom eighteen had black vomit. These cases were regularly attended by the physicians and nurses of the establishment, not one of whom was affected by the disease; "nor has a single case," says the Doctor, "come to our knowledge, of any person taking it, who was engaged in transporting the sick from the city to the hospital."

Again, Dr. Beck says: "In addition to the cases already recorded, there were a large number of persons, who, after having contracted the seeds of the disease in the city, had the disease developed in them after their removal into different and distant parts of the country. There occurred about thirty-six cases of this kind, and at the following places, viz: three at Newark, New-Jersey; one at Harlem; three in the city of Jersey; one at Tappan, New-York; six at Bloomingdale; one at Albany; three at Middletown point; four in different parts of New-Jersey; one at Newtown, Long-Island; one at New Canaan, Connecticut; two at Amboy, New Jersey; one at Hempstead, Long Island; one in Westchester; one at Bloomfield, New Jersey; one at Woodbridge, New Jersey; one at Saugatuck, Connecticut; two at Bushwick, Long Island; two at Elizabethtown, New Jersey; and one at Boston. Of this number, there were twenty-seven deaths, being three-fourths of the whole number, or seventy-five per cent, proving the disease to have been of a very decided and malignant character; and yet, not in a single instance was the disease communicated. That one hundred persons, sick of a disease highly

malignant and contagious, (as some contend,) located in different parts of the country, should not, even in a solitary instance, have communicated it to a second person, seems to us literally impossible; and we believe, that were it not for the influence of pre-conceived opinions, and long cherished theories, facts of this sort would come home to the minds of men with a force perfectly irresistible." Dr. Beck continues: "There are some persons who have contended that yellow fever may be contagious in one kind of air, and not so in another. All the testimony adduced from the fever of 1822, is directly adverse to this position. If we suppose the cause of yellow fever to enter into chemical combination with the surrounding foul atmosphere, then it would no longer be the same disease. If, on the other hand, the air serves merely as a medium for transmitting the poison to a greater distance, then no reason can be assigned why, if you approach near enough to the sick body, contagion should not display itself as well in a pure as in an impure atmosphere. It has been already shown, that not merely in the pure air of the country, but even in the most impure and unhealthy parts of our city, patients sick of the yellow fever in 1822, were uniformly approached with perfect impunity. The air, therefore, in the infected district, must have been more venomous than the contagious poison itself coming off directly from diseased bodies — that is, poison diluted in atmospheric air, must have been more powerful than pure unmixed poison itself; a proposition absurd in itself.

"We infer, then, as the air of the infected district was more deleterious than actual contact with the sick, the poison existing in the air must have been some other than effluvia from the bodies of the sick."

I shall not follow Dr. Beck any further, but will give Dr. Peixotto's opinion of his whole argument.

"I have made free use of this admirable argument against the contagiousness of yellow fever, because it will serve as a model by which to analyze those that are supposed to be contagious. It recommends itself more strongly to the medical critic, because it is divested of all speculation. The question of the origin of yellow fever, is, with logical propriety, left out altogether, the writer's aim having been simply to sift the question whether the epidemic of 1832 was, or was not contagious. To this object, so important every way to the interests of the community at large, and of mercantile cities in particular, the au-

thor restricts himself, and he has accomplished it in a manner which has forbidden all reply or contradiction."

Since the first time I saw a case of yellow fever in 1822, to the present time, I have not seen the least evidence to prove that yellow fever is contagious, but facts have been constantly accumulating to prove the reverse. In this city, my experience has been chiefly among the Irish and German emigrants. I have generally found them very much crowded, and particularly the Irish. In several instances, where, perhaps, twenty or thirty persons occupied two or three small rooms, and all unacclimated, I have attended five or six with the yellow fever, while all the rest, although in constant contact with the sick, have escaped the disease. How could this happen under such circumstances so favorable to the propagation of the disease, if the fever were contagious? There may be two or three physicians in this city who believe that yellow fever is contagious; but in opposition to this opinion, the faculty may be said to be almost unanimous. Sporadic cases of yellow fever are utterly repugnant to the doctrine of contagion. Until within three years past, during which time the fever has been rather sporadic than epidemic, the yellow fever prevailed with great regularity as an epidemic every other year, but there were always sporadic cases in the intermediate years. If the disease were contagious, why should there be sporadic cases one year and an epidemic the next? This would seem to imply that it might be contagious one year and not another; but this is absurd. The existence of sporadic cases is decisive of the question of contagion.

It has been stated that the quarantine laws have preserved Natchez from the yellow fever, as that disease has not appeared there since that system was adopted. If the disease is contagious, and can be carried by persons, and so transmitted to others, the quarantine laws, in this event, have been of no use whatever; for it is well known that every year, persons from this city, who wish to stop at Natchez, evade the quarantine laws by going a short distance above Natchez, and returning with the first boat that may be descending the river.

In this city the disease has been greatly modified during the last ten or fifteen years, and it is milder and more manageable than it formerly was; and with a rapidly increasing population, there are fewer persons in proportion attacked, and the mortality is diminished one half, if not more. And this result does not arise from the absence

of unacclimated persons in the summer season ; there is always an abundance of such material for the fever to work upon. It is to be attributed to the improvements that have been made in the city ; the paving of the streets and yards ; the use of asphaltum ; the erection of brick buildings in the place of old decayed wooden houses ; the greater care that is taken to clean the streets and gutters, by letting the water run through the streets when the river is high ; and removing all filth and offal. Much more might be done, and no doubt will in time be done, and we should promote the interests of the community far more by devoting our attention to this subject, than by establishing useless quarantine laws. For three years past, that is, 1842, 1843 and 1844, there has been scarcely any fever worth speaking of in this city. It is during this period that the quarantine laws have been established at Natchez, and therefore there has been no fair test of their utility. As steamboats are constantly ascending and descending the river during the summer season, as well as at other seasons of the year, whenever the yellow fever has prevailed, it should, if contagious, have been carried to all the towns on the river, and from them to all parts of the adjoining country. But yellow fever has prevailed in this city, while the congestive fever has existed at Natchez, Grand Gulf, Vicksburg, and other towns on the river. It is not pretended that yellow fever is more dangerous than the true congestive fever of the highest grade ; in fact, yellow fever is the least dangerous and fatal of the two. And quarantine laws cannot affect the existence of that fever, for all admit that it is of local origin, and that it is not contagious. In fact the doctrine of quarantine laws is losing ground everywhere, and perhaps in half a century, it will have become almost an obsolete idea. The *Journal des Débats*, published in Paris, while commenting on the existing quarantine laws of France, remarks as follows : “ While England and America are conforming to the spirit of the age, and to the progress of human science, shall we proudly maintain our quarantine laws ? The effect of this perseverance is, that we, who possess an admirable position on the three seas ; we, whose soil appears the almost compulsory line of passage for so many nations—we find ourselves, in fact, further removed from Egypt and Constantinople than all the rest of Europe. We, who take so much care to avoid the plague, are avoided by travelers, as if we were pestiferous. Within the last few days our Ambassador at Constantinople, and our Charge d’Affaires at Alexandria, have been summoned to Paris, and patriotic as they are, they proceeded, one by the Austrian steamboat via Trieste,

and the other by the English boat, via Southampton. In consequence of the quarantine laws, the passage from Constantinople through Trieste, and from Alexandria via England, to Paris, gives the traveler a gain of seven days.

“The following is a curious contradiction ; we have established a direct line of steamboats from Alexandria to Marseilles, in order to anticipate all other nations in our communications with Egypt, and by this mode we arrive at Marseilles from Alexandria in seven days, but we pass fifteen days in the Lazaretto on our arrival at France. Is that common sense ? Our quarantine laws cause our Levant packet boats a loss of two millions. They deprive France of the transit of thousands of wealthy travelers returning from India to England, who would expend in France from five to six millions a year. It is estimated that quarantine laws enhance the price of primary material consumed by our manufacturers, such as cotton and wool, at least ten per cent.

“They cause an enormous prejudice to our commercial shipping interest ; and they affect it not only in the Levant, but every where else. A few weeks since a ship laden with cotton arrived at Havre, with about twenty passengers. She had touched at the West Indies, and had a case of yellow fever during the passage. The board of health at Havre prescribed twenty-five days’ quarantine. The owner, who was present, ordered the captain to set out instantly for Southampton. There the passengers met with no difficulty, and embarked in the steamer for Havre, where they were without hesitation permitted to land. But as the cotton could not be disposed of advantageously at Southampton, the ship returned to Havre. The board of health however recognised her, and insisted on the twenty-five days’ quarantine, although the passengers and their baggage, which might have conveyed the yellow fever, as well as the ship itself, had arrived at Havre several days previously.”

This article from the *Journal des Débats*, gives us a fair illustration of the immense loss, the gross absurdities, and great inconveniences, which result from quarantine laws.

I have now endeavoured to prove :

1st. That yellow fever, like the other malignant diseases of the south, is of local origin.

2nd. That it is not an imported disease.

3rd. That it is not contagious.

4th. That civilization has developed diseases, which a higher grade of civilization, aided by changes of climate, may modify or abolish.

5th. That there is a yellow fever region, in any part of which, the fever may at any time originate.

6th. That on this continent, the yellow fever region has receded greatly.

7th. That the yellow fever has been abating in New Orleans in a ratio with the improvements going on in the city.

8th. That there is no occasion for quarantine laws. That experience has shewn them to be useless here : while they would be very expensive, highly injurious to our commercial interests, and onerous to passengers.

If we consider the history of yellow fever for one hundred and fifty years, we shall find that it prevailed once all along our Atlantic coast as far north as Portland in Maine ; also, in the southern parts of Europe ; that its limits are now *twelve* degrees farther south ; that this has been brought about by changes of climate, over which man has no control ; and also by police regulations and the general improvements which have kept pace with, and resulted from the progress of civilization ; and that this has been eminently the case in the city of New Orleans. This should encourage us to persevere in our efforts. Commissaries should be authorised and required to look into back yards, and have every thing offensive removed. Acts of the council should be passed to have the surface of the earth every where coated with something, to suppress the exhalations from the alluvial soil : such as round stones, or paving stones, or shells and sand, or bricks, or asphaltum. All low wet empty lots should be filled up. Offal deposited in the streets, and all filth, should be promptly removed, and instead of being used to fill up lots, or thrown in the rear of the city, it should be thrown into the current of the river, where it would be carried off. Water should always be permitted to run through the streets when the river is high, and when it is too low, the water works, or additional works for that purpose, should be brought into play. The wharves should be particularly attended to, and as the river falls,

persons should be prevented from throwing animal or vegetable matter underneath them, and all such matters as soon as discovered should be immediately removed. Carrying into effect these measures would scarcely cost a tithe of the expense of a quarantine establishment properly conducted. And how vastly superior, and conformable to the spirit of the age, are such measures, to the dubious experiment of those laws.

They might lull us into fatal security, and divert our attention from the other more important considerations ; in which event, even if yellow fever were prevented from entering the city, other diseases equally fatal, probably would prevail. But let the measures suggested be adopted, and pushed forward by enlightened and energetic action, and there is little reason to doubt, that in the course of a few years, New-Orleans would be exempt from the yellow fever. It would be no longer within the region of that pestilence ; and at the same time, the very measures that would bring about this great result, would also protect us from the other malignant fevers of the summer and fall, which are peculiar to our climate and position. There would then be no obstacle to the progress of this city. In less than half a century, she would so far have accomplished her high destiny, as to be the first city in the western hemisphere, in wealth, population, commerce and general prosperity.

The subject was referred to a committee of four physicians besides Dr. Hort, namely : Drs. Farrell, Jones, Anson and Dowler, who unanimously approved of the views taken, and submitted the following report, which was unanimously adopted by the society, May 10, 1845.

“ That while they admire and appreciate the ability with which several eminent medical men have advocated the contagiousness of yellow fever, its importation from the eastern, into the western hemisphere, and the consequent necessity of the establishment of quarantine laws, they nevertheless consider that the weight of testimony and

of facts is immeasurably on the other side of the question ; and which opinion is further confirmed by their own experience and observation.

“That they can see no reason why the same local and general causes, under the same circumstances, or very nearly so, should not produce similar results in the production of malignant fevers, in both hemispheres of the world.

“That where sufficient causes exist to engender disease in one place, it is useless to speculate on the question of its importation from some other place.

“That in reviewing the history of the yellow fever for one hundred and fifty years past, the committee have come to the conclusion that it was developed, as were many other malignant diseases, before unknown, by the march of civilization, urged forward by commercial enterprise.

“That in this way, in the course of time, yellow fever became developed in both hemispheres, confined within nearly the same parallels of latitude, and forming distinct yellow fever regions, in addition to the regions of cholera and plague.

“That in the gradual progress of civilization, measures have been adopted, and changes of climate have taken place, which have greatly diminished the yellow fever region in this hemisphere ; and that its northern limit is now twelve degrees south of what it was a hundred years ago, in the time of Lind.

“That this great result has been accomplished, not by quarantine laws, but by other judicious police regulations, together with great changes in the local features of countries ; and those atmospherical changes, over which man has no control.

“That quarantine laws, even should their existence be deemed necessary, are inadequate to the protection of a seaport of easy access ; as Dr. Rush says, that a *still more rigid* quarantine called for in 1797, in Philadelphia, failed to accomplish the purpose desired. In 1805, the same fact is affirmed by Dr. Rodgers, health officer at New-York.

In 1822, if imported, the system again failed at New-York, (and in this city, it signally failed in 1820 or 21, when a rigid quarantine was established at the English turn.)

“The committee are therefore of opinion, that quarantine laws are unnecessary and inexpedient for the protection of the city.

“That even if they did prevent the importation of yellow fever, (admitting for one moment for argument sake, that the disease might be imported,) they could not at any rate prevent the existence of diseases equally fatal; such as the congestive fever, and the malignant types of intermitting and remitting fevers.

“That facts seem clearly to prove, that the yellow fever has decreased in malignity, in a ratio with the improvements of the city—as the draining of the land in the rear of the city; the paving of the streets; the filling up of empty lots; the use of asphaltum; permitting the river water to run through the streets, when the river is high; and the removal of filth and offal from the streets.

“That instead of quarantine laws, the measures last alluded to, should be steadily persevered in, and carried by an enlightened policy, to a still greater extent; which would not only have a tendency to avert yellow fever, but all other malignant diseases, peculiar to our climate and position, at a particular season of the year.

“The committee, in conclusion, sum up this report by declaring:

“That they believe the yellow fever to be a disease of local or domestic origin, and that it is not an imported disease.

“That it is never contagious.

“That it may be made to yield to judicious police regulations.

“That quarantine laws are very expensive to the community, and that they are not only unnecessary and inexpedient, but worse than useless. They therefore recommend:

“1. That the commissaries in each ward, be required to look into back yards and lots; and be authorized to cause every thing offensive to be promptly removed.

"2. That the different councils of the city, should exert themselves to the utmost in their official capacity, to have the surface of the earth covered over with something, to prevent the exhalations from the alluvial soil, on which the city is built; either round or paving stones, or bricks, or shells and sand, or asphaltum.

"3. That the owners should be compelled by law to fill up all low swampy lots within the limits of the city.

"4. That all offal deposited in the streets should be promptly removed; and if possible, before the heat of the day.

"5. That whenever the river is high, the water should be allowed to run through the streets day and night; and that when it is too low, the water-works, or if necessary, additional works established for the purpose, should be brought into play.

"6. That above all, particular attention should be paid by the city authorities, to the alluvial bank, particularly under the wharves of the Second Municipality, which is annually uncovered as the river falls, exposing an immense surface of fresh deposit, covered with every kind of decaying vegetable and animal matter, which daily accumulates, either carried there by eddy currents of the river, or thrown in by the inhabitants.

"The committee deem this last consideration to be of the highest importance, as there is every reason to believe, that the bank of the river under the wharves, is more productive of disease in the summer, than all other causes in the city, combined.

"7. That instead of depositing the filth and offal collected in the streets by the scavengers, in empty lots or in the rear of the city, it is recommended to the city authorities to have all such filth and offal thrown into the current of the river.

"They would also observe, that the measures just recommended, would not be attended with one-fourth of the expense of a quarantine establishment properly conducted; while should they be pushed forward with zeal and energy, the time might, and no doubt would, ere long, arrive, when New-Orleans would no longer be within the yellow

fever region ; and consequently exempt, not only from that pestilence, but from all other fatal diseases of the summer and fall, peculiar to our climate and to our position. This accomplished — what would there remain to retard the growth and prosperity of our city ? She would speedily accomplish her high destiny, and in less than a quarter of a century, become the most wealthy, prosperous, and populous city in the western hemisphere.

ANSWERS OF WM. C. WALLACE, M. D.

TO DAVID E. WHEELER, CALVERT COMSTOCK and REUBEN H. HINE, Committee.

Gentlemen—In reply to your first question, I beg to refer you to the accompanying essay on the origin of febrile diseases. I have there stated it to be my opinion, that, inasmuch as we have always present the same elements for infecting the atmosphere, the same decomposing matter, and the same temperature for generating putridity, yellow fever is not of domestic origin. It is difficult to conceive how the opinion, “that the impurities of the atmosphere are fermentable materials, to be called into action by the specific ferment of diseases,” could be supported by scientific men, as we have no data to show that air is capable of fermentation. If fermentation occurred, the whole mass would be affected, and desolation would sweep the continent. It has been acknowledged by men of high intellect, both of the contagionist and anti-contagionist parties, that “it is an established fact, that the agent which produces yellow fever, is capable of being transported from one country to another,” and reason, as well as observation, confirm the acknowledgment. We know nothing of the chemical nature of the contagious principle of yellow fever, yet it seems capable of being extended beyond the primitive district; and I can see no other way by which it can be propagated, except it be by the laws of organic life. I have presumed it to be a parasite which takes root on decaying matter, and diffuses its poison through the air, and that that parasite being of tropical origin, is blighted by frost.

2. The bilge water, fragments of food, and other decaying matter in a vessel, for a soil on which the poison may be propagated more readily than by a vehicle which comes by land. It appears in tropical climates, generally, from the beginning of June till November;

there is, consequently, danger from arrivals from tropical climates during this period.

3. The importation of the contagious matter of yellow fever would be effected by vessels, and such cargoes as form a soil for mouldiness. Passengers, if their clothing was left behind, would not, I think, after careful ablution, communicate the disease.

4. As by the present system of detaining suspected vessels, the city has been preserved from yellow fever for nearly a quarter of a century, it would seem inexpedient to make any change in this regard. By inattention to the laws, a vessel was permitted to pass to Rondout a few years ago, where a fever broke out and threatened the health and commerce of the city. The allotted period of thirty days should not, I think, be diminished. The personal inconvenience, by the detention of a cargo, is small, compared with the vast concerns of this populous city.

5. A healthy vessel, from a healthy port, in the same or a more northerly latitude, would not, under ordinary circumstances, (as exemption from the general prevalence of cholera, &c.,) communicate disease. As the city depends on her commerce, it is the interest of all, to remove all unnecessary restrictions, yet, during the months of August and September, vessels coming from southern ports should be admitted with caution.

6. A voyage of thirty days would be sufficient to test the purity of a vessel.

7. A healthy vessel, from a healthy port in Europe, ought, I think, to be admitted without any detention; provided the existing laws in relation to pilots are enforced. [Title 2, Article 2 and Article 6, Section 82.]

8. From what has been already stated, it would be more imprudent to allow the cargoes of suspected vessels to be brought to the city, than passengers whose clothing has been changed. All matters capable of undergoing decomposition, of affording a soil for mouldiness, or of absorbing gases, (such as earth mould about the roots of plants, exposed meal, flour, &c.,) would, in my opinion, be more likely to be injurious than metals, marble, manufactured wood, manufactured goods, &c.

9. After ablution and change of clothing, I do not think that passengers would communicate any remittant fever.

10. I do not think that animal or vegetable matter, while in a vessel, will originate any contagious disease.

11. From the history of previous epidemics, I do not think that the introduction of the Croton water will affect their propagation to any great extent.

12. The yellow fever and the Bulam fever are considered by authors as synonymous terms. That yellow fever may be modified by climate, was shown by the character of the fever which lately prevailed at Rondout.

13. The most generally entertained opinion by unprejudiced physicians, is, that yellow fever is not communicated by personal contact. I think it is communicable only in the way I have stated in my paper.

14. The progress of medical science has shed very little light on the rational observance of quarantine laws. Those related in the books of Moses, appear more perfect than those of the present day. Now there are two parties; one of which would abolish the laws altogether; whereas, the other would make them still more restrictive. Perhaps truth lies between the two.

The internal quarantine laws deserve a passing notice.

1. Dens of infamy are a fruitful source of disease, which is occasionally transmitted to the innocent. One means of checking its propagation, within the reach of the legislature, would be to tax the owners of houses of this description, for the depreciation of the rents of the property in the neighborhood, to be fairly assessed. Equal justice would, in this manner, be distributed, and, besides, a nuisance would be prevented.

2. The same law might be made to apply to slaughter-houses, melting houses, and nuisances generally.

3. A law prohibiting the feeding of cattle on swill, which is known to cause abscesses of the lungs, and to produce purulent matter in their milk, would also favor the temperance cause.

4. Means should be adopted for the removal of smallpox patients to some other locality than Blackwell's island, as people of any respectability are unwilling to go there.

5. The nominations of all the physicians and surgeons of all the public charities, should be made by the medical society ; not only for the benefit of the sufferers, but of the public. The present plan of filling these offices by favorites or party hacks, is productive of many evils.

Respectfully,

W. C. WALLACE.

ANSWERS OF D. MEREDITH REESE, M. D.

TO DAVID E. WHEELER, CALVERT COMSTOCK and REUBEN H.
HINE, Committee.

New-York, Nov. 23, 1845.

Gentlemen—In compliance with your request, I proceed to reply to the queries of your committee. Had I received it earlier, I should have taken pleasure in communicating with you at greater length, as my opinions have been formed after personal observation and experience in the midst of yellow fever in a southern city.

* 1st. The yellow fever is the name given to the *malignant* form of bilious remittent fever, when it becomes epidemic or endemic, attended with greater intensity and fatality than under ordinary circumstances. It has been “of domestic origin at the port of New-York,” as the history of its prevalence here in former years will amply demonstrate.

2nd and 3d. The yellow fever never was nor never will be imported into this port by sea or land, in the persons of the sick; for the reason that it is not a *contagious* fever as smallpox is, that is, not communicable from the bodies of the sick to the healthy. It can only be *imported* in the holds of vessels, nor is there any danger of cargoes or persons.

4th. It is prudent to allow such vessel to come to the wharves immediately, nor is there any rational pretext for detaining such vessel, unless for the purposes of cleansing and ventilation, which can be as thoroughly done in 24 hours as in a month.

5th. It *is*, immediately, unless for the time and purposes just named, which may be as necessary for the safety in a vessel coming from a healthy port as from a sickly one; and especially after a long voyage.

* See Circular and Interrogatories.

6th. No other effect, than to call for increased attention to the cleanliness and ventilation of the holds of such vessels, after long voyages, and the removal from the holds of any portion of the cargo which, being of destructible nature, had become decayed or putrid.

7th. I answer in the affirmative without qualification.

8th. The only supposable cases in which vessels "cannot be allowed to come to the wharves with safety," are when the *smallpox* has been on board, or in which the air within the holds of such vessels is contaminated, as by bilge water, decaying vegetables, or accumulated filth, and confined air. In either case, the vessel should be sent to quarantine, the holds thrown open, the cargo taken out, a thorough cleansing, whitewashing and ventilation, should be resorted to; and if there be sick on board, they should be sent to the hospital, while the healthy might come to the city, after a longer or shorter detention, for airing and washing their clothes, in the discretion of the health officer; which in the case of smallpox being on board, should be rigidly enforced. After such detention for cleansing, &c., the vessel and cargo, so far as the latter may be sound, may be safely brought to the city. The discrimination as to the articles likely to communicate disease, should likewise be vested in the proper officer, who should prohibit all cotton, linen or woollen clothing, or bedding which has been in contact with the smallpox, from coming to the city, which, indeed should in most cases be destroyed. As respects heavy articles of merchandize, boxes, bales, barrels, &c. including iron or other metals, salt, grain, &c. &c. no detention is necessary after cleansing and ventilation.

9th. In such cases, the answer just given may suffice. If the smallpox have been on board, even the healthy passengers or crew may carry the contagion in their clothing, and hence should not be permitted to come to the city, without the precautionary measures named having been premised. But if yellow fever, or any other fever except smallpox, have been on board during the voyage, all the healthy passengers should be permitted to come to the city immediately, but the vessel should be detained for ventilation, and the inspection of her cargo, the origin of the disease being often found in the condition of the hold of the vessel, even when coming from a healthy port.

10th. Decaying fruits and vegetables, in the hold of a vessel, may "originate the malignant yellow fever," not only on board, but at the

wharf where it may lie, and infect the whole neighborhood adjacent, by contaminating the air with the poisonous exhalations, which generate the disease. But decaying animal matter, though unhealthy in its putrid emanations, and capable, under certain circumstances, of creating other forms of disease, has never been known to originate yellow fever. All that has been said about its having been produced by putrid hides, or even burying grounds, is sheer fable.

11th. The introduction of the Croton water into this city, by affording great facilities for cleansing the streets, lanes and alleys of the city, and purifying the sewers, &c. has rendered us less liable to be visited either by yellow fever, or other epidemics, if these facilities are diligently improved by the city authorities. And as the exhalations from filth of any kind, during the summer months, has a tendency to spread epidemics of any kind, should the yellow fever ever visit us, keeping the city clean, would do much to prevent its spreading.

12th. The yellow fever is identical with the African fever named, and as it originates there, so it may originate any where, under the like contingencies of heat, humidity, and putrid exhalations from decaying vegetables, marshes, &c. Like all other epidemics, it is modified by climate, and atmospheric condition, which is not the case with a contagious fever, as smallpox.

13th. The yellow fever is not communicated by personal contact, but by an infected atmosphere. No number of the sick, can so infect a healthy atmosphere as to produce yellow fever, though other diseases may be produced by foul air. But if the air of a neighborhood be infected by the cause of yellow fever, which is a specific poison, all persons breathing it any length of time, especially in the night, are liable to be attacked, even those who only visit the infected district for a few hours. But in all cases the line may readily be drawn, circumscribing the infected district, and beyond which perfect impunity may be enjoyed, even though in contact with the sick and dying, who have been removed from the epidemic atmosphere.

14th. The progress of medical science has had but little effect upon the policy of governments, in relation to quarantine laws, however enlightened. I speak comparatively, for modifications, in some countries, have been the result. Superstition is still in the ascendant, and so many mercenary considerations plead for the perpetuation of governmental revenues, and the spoils of office, derived from quarantine

laws, that the dictates of true science are disregarded, and even falsified, by interested parties. Popularity is gained by eternizing vulgar errors, and ministering to the morbid fears of the ignorant, and even by propagating the absurd delusions of contagionists, though enlightened science has long since exploded them.

I have twice suffered attacks of yellow fever by being obliged to visit the infected district, professionally ; and yet I have, at another time, lived and slept in the midst of the sick and dying of yellow fever, who had been removed into a healthy situation, without witnessing a single instance of infection, among physicians or nurses. And but for the antiquated superstition of the times, there would be as much reason for prohibiting a passenger, whose leg was broken, from being brought to the city, as one sick with yellow fever. Indeed, there is quite as much danger of catching a broken leg, in the one case, as the yellow fever, in the other.

I am decidedly of opinion, that the oppressive features of our quarantine system, in this State, should be reckoned among the relics of barbarism, which an enlightened Legislature should make haste to abrogate, for the sake of our character as a people. With the exception of the restraints and restrictions I have named, for the prevention of the importation of smallpox, and for cleansing and ventilating vessels, which, from any cause, require it, there is no pretext for the perpetuation of a system founded in ignorance, and fruitful only in private and public injustice, cruelty and wrong.

Yours, respectfully.

D. M. REESE, M. D.

ANSWERS OF W. S. W. RUSCHENBERGER, M. D.

SURGEON U. S. NAVY.

TO DAVID E. WHEELER, CALVERT COMSTOCK, and REUBEN H.
HINE, Committee.

U. S. NAVAL HOSPITAL, }
New-York, November 29, 1845. }

Gentlemen—Official occupation has prevented me from replying to your circular of July, in relation to the quarantine regulations, before this time. I have limited myself to a brief statement of my own opinions, formed from upwards of twenty years' experience in the profession, at home and abroad, and after as much consideration as I am able to give to this very important subject. My views could be sustained by reference to medical authorities, but I do not conceive it necessary to write a volume, made up chiefly of the statements of others, to communicate my opinions.

There is a remark in your circular to which I beg leave to call your attention, because I conceive it bears strongly on the interests of the whole medical profession. Being a servant of the government of the United States, I may express myself freely, without being charged with urging my opinion from necessity or selfish notions.

You say, "we are aware that a compliance with our request will impose considerable labor upon you, but we are persuaded that you will not hesitate to give to our citizens the benefit of your learning and experience."

This is addressed to certain members of the medical profession, who are presumed by you to possess valuable information of a kind which would be a safe guide to enable you to draw such laws as would free commerce, in a measure, at least, from some of its restraints, without endangering the health of the community. You are aware, you state, that the expression of views and opinions, which may have derived their sole value from many years of study, "will impose con-

siderable labor," and presume that this labor, learning and experience, will be freely, gratuitously, given to our fellow citizens. I have no doubt that the result will prove your presumption to be correct; but, is it either just, equitable, liberal or generous? Why should our fellow citizens expect medical men to serve the public gratuitously, while they freely and fully pay for the labors and services of every other class and description of men? In common with their fellow citizens, medical men contribute their full quota in taxes, &c., to support the government; and as they enjoy no special exemptions, there seems to be no reason why they should pay extra in labor, &c., for the benefits of government. Lawyers and legislators do not serve the people without pay. Attorneys and judges are not expected, without remuneration, to protect society from the acts of murderers and felons, by just administration of laws. Soldiers and sailors are paid for defending the people from a common enemy in war. The divine who addresses the throne of grace, in behalf of the representatives of the people assembled in the legislative hall, does not pray without reward. Why then should our fellow citizens expect the gift of labor, time, learning, and experience of a physician, in cases where these are necessary for the common safety and benefit of society? Our fellow citizens often require testimony which can be given only by a member of the medical profession, as in certain cases of inquest by coroners where the question of murder is involved; and it most frequently happens, that while coroner, jurors, witnesses, attorneys, &c., are fully paid, the physician is merely thanked for his learning, experience, and labor, without which they could not act; and, should the physician refuse his services, reproaches would be heaped on him by his fellow citizens, even by the coroner, jurors, &c. Medical men are promptly attentive to the voice of the afflicted, and give largely of time and labor to suffering individuals without fee, or expectation of reward.

I trust I may be pardoned for my boldness in saying, that it seems to me unbecoming in the government of a great State, to ask, through a committee of its Legislature, gratuitous labor from individuals, and exclusively from one class of individuals. So far as I know, government has never asked nor received services from members of the legal profession without fee.

To insure safety to the community, the subject of quarantine should be most carefully examined, in all its bearings, before the present re-

gulations, defective as they may be in many particulars, are modified. The subject falls within the province of medical science, and a commission or board of medical men, selected on account of their learning, experience, and high moral character, might be wisely employed to investigate and report fully on the matter.* I learn from the newspapers this course has been followed in France, and a report has been recently made, but not yet published.

My opinions on the several points embraced in your interrogatories are herewith communicated, and most cheerfully given, and notwithstanding what I have said above, should they in any manner assist you to a conclusion, I shall esteem myself fully rewarded.

The whole is submitted, and I have the honor to be, very respectfully,

Your obedient servant,

W. S. W. RUSCHENBERGER, M. D.

Surgeon U. S. Navy.

* The College of Physicians and Surgeons of the University of the State of New-York, ought to be able to furnish all requisite information on the subject.



ANSWERS TO THE QUESTIONS.

QUESTION I. *Is the yellow fever of domestic origin at the port of New-York?*

I believe yellow fever to be of local origin. It may occur in New-York, or at any place where circumstances are favorable to its development. Putrefaction of large vegetable masses, as a cargo of coffee or perishing fruits, where the temperature is very high for some days, in situations where ventilation is wanting or imperfect, might produce such a condition of the atmosphere, in the vicinity, as would beget yellow fever.

QUESTION II. *Is the yellow fever imported by sea into this port, and if so, at what seasons, and from what countries or ports is it likely to be imported?*

Persons affected with yellow fever may arrive at New-York by sea from New Orleans; from the West Indies, and even from the coast of Mexico, during the heat of summer, say June, July and August. But I do not believe such passengers could communicate the disease to others. It may be imported.

QUESTION III. *If imported, in what way is its importation most likely to occur, by vessels, cargoes, or passengers, and from which source is there the most danger?*

In my opinion, the chief, if not the only means by which yellow fever may be imported, is by the cargo. A cargo of decaying fruits, or vegetable matter arriving, after a voyage of two or three weeks, from a port where the disease prevailed, ought not to be landed in hot weather on the city wharves, as the atmosphere might be infected thereby. In such a case, the vessel's hold should be opened, and well ventilated for several days, and rendered pure as possible. A

perfectly clean vessel, in ballast, or laden with metallic or mineral substances, or brandy, &c., I think would not import yellow fever; still, it would be prudent the vessel should be well ventilated, before the cargo is placed on the wharves. Persons, could not convey the disease to others; but their baggage, if packed in a place where the disease prevailed, might be dangerous, under particular circumstances; clothing, worn by persons while suffering from the fever, before it has been cleansed, may be a vehicle of disease. On this account, it would be prudent not to permit passengers, from yellow fever countries, to carry soiled linen, &c., with them into the city in hot weather.

QUESTION IV. *If a vessel arrive from a sickly port, without any sickness on board during the passage, and on inspection by the proper officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection—if not, how long after?*

If, under the circumstances stated, the vessel had been several weeks at sea, before arriving from a sickly port, she may be admitted at once to the wharves, I think, without danger; at any rate, after ventilating the hold for three days, there would be, in my opinion, no danger or risk whatever. If a vessel had been at sea less than fifteen days, after leaving the sickly port, that is, if the sickness of the port were contagious or infectious, such as smallpox, for example, there might be risk in admitting her at once to the city. A detention of from three to five days might be enforced, as a matter of prudence.

QUESTION V. *If a vessel arrive from any port, in whatever latitude, such port being healthy at the time of the departure, without any sickness on board during the passage, and on inspection by the proper officer, appears in all respects healthy, and the cargo all sound, is it prudent to allow her to come to the wharves immediately after such inspection?*

No matter what may be the season of the year, under the circumstances described, after inspection, the vessel should be at once admitted to the wharves. I am aware of no reason, or prudential consideration, which would render even a minute's delay either desirable or necessary.

QUESTION VI. *Would the length of time occupied by the passage from port to port have any effect upon the answers to be given to the two last questions ?*

This question has been already answered above.

QUESTION VII. *If a vessel arrive from Europe, having had no infectious or contagious disease during the voyage, and the passengers on her arrival are all healthy, is it prudent to allow the vessel with her passengers to come immediately to the city ?*

Under the circumstances stated, there is no valid reason why vessel and passengers should not be at once admitted to the city, especially if they have been twenty days at sea.

QUESTION VIII. *In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit their cargoes to be brought to the city ; and if so, ought there to be a discrimination as to the articles, and what articles of merchandize are most likely to communicate the disease ?*

There can be no danger to the health of the city from a clean, empty vessel : if her hold should be foul, containing putrid or decaying matter or mephitic gases, those persons who enter it, for the purpose of cleaning, might be made sick, possibly die ; but they would, probably, not communicate disease to others. A cargo of mineral or metallic materials, as hardware, might be safely landed : but cotton, wool, hides, furs, &c., in a raw state, or manufactured, I think, ought not to be landed on the city wharves, from a sickly ship, having contagious disease on board, during hot weather. There is more to be apprehended from the cargo, from the luggage and soiled clothing of the sick and of their attendants, than from the vessel or passengers, unless smallpox, or other decidedly contagious disease, exist amongst them.

QUESTION IX. *In cases of vessels which cannot with safety be allowed to come to the wharves, is it prudent to permit the passengers immediately to enter the city ?*

It may, or may not, be prudent to permit passengers to land from sickly ships, according to the circumstances peculiar to each ship. For instance, those passengers, who, on the voyage, had passed through contagious disease, as smallpox, might freely land with their

clean linen, but those who might have been exposed to the contagion too short a time to decide that the disease would not appear in them, should be kept out of the city.

QUESTION X. *Will fruits, vegetables or animal matter, while in a vessel, ORIGINATE the malignant yellow fever; and if so, from which is there the most danger?*

My own experience furnishes me with no knowledge on the question. My notion is, that fruits and vegetables, in a state of decay, would be more morbidic than animal matter in the same state.

QUESTION XI. *Has the introduction of the CROTON WATER rendered the city of New-York less liable to be visited by the yellow fever; and will it prevent its spreading should cases of it occur?*

As cleanliness is unfavorable to the generation and extension of disease, it cannot be reasonably doubted that a full supply of pure water to the city will contribute greatly to the health of its inhabitants; but, that it will, in any degree, serve to protect them against yellow fever, or any epidemic disease, is a question not easily solved.

QUESTION XII. *Is the malignant yellow fever the same as the Bulam fever on the coast of Africa, and does it originate there; and if prevalent in any other place, is it modified by climate?*

Bulam fever and yellow fever are two names for the same disease, which occurs on the coast of Africa, in the West Indies, at Gibraltar, and some other ports of the Mediterranean, as well as in some of the northern Atlantic cities in the United States. I have never witnessed this fever on the coast of Africa.

QUESTION XIII. *Is the yellow fever communicated by personal contact, or by an infected atmosphere, or both?*

In my opinion, yellow fever cannot be communicated by personal contact, but is communicable by an infected atmosphere exclusively. I do not believe that persons sick of yellow fever are capable of infecting the atmosphere, so as the disease will be conveyed to persons visiting or attending on them.

QUESTION XIV. *What effect has the progress of medical science had upon the policy of enlightened governments in relation to quarantine laws?*

The answer of this question, involves in detail the history of quarantine, in all countries ; I have not the means at hand to reply to it.

The interrogatories seem to have been framed with a special view to yellow fever. The *typhus* fever, known under the names of *ship fever*, *jail fever*, *camp fever*, &c., is a contagious disease, under certain circumstances, and is worthy the consideration of those who may propose modifications of the quarantine laws.

Spasmodic or Asiatic cholera is not contagious, and cannot be controlled by any quarantine regulations ; municipal law can no more reach it than an influenza, when epidemic. Indeed, quarantine is, in my opinion, as it is usually observed, very inefficient in preventing the importation, origin or extension of diseases ; in other words, in a great majority of instances it is totally useless. Vessels arriving from around either Cape Horn, or the Cape of Good Hope, might be suffered to pass to the city almost without inspection ; yet these vessels, in common with others, are restrained in coming to the city. Little, or rather, nothing, is to be apprehended from a clean vessel with a sound cargo, from any point south of the equator.

It may be difficult to abate the evils to commerce from quarantine regulations, until some plan can be devised and adopted, placing discretionary power in the inspecting officers, with safety to the public. A discretion which may be swayed by considerations of personal profit would be unsafe ; and a high salary seems to be the surest means of securing this sort of discretionary power from abuse ; and the tenure of office being made during good behavior or for life, would tend very much to the same end.

These remarks and suggestions are submitted, by

Very respectfully,

Your obedient servant,

W. S. W. RUSCHENBERGER.



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COMMUNICATION FROM C. B. ARCHER, M. D.

CITY INSPECTOR.

New-York, January 17th, 1846.

My Dear Sir—I will give you very briefly, my views on the effect of the present system of allowing the pursuit of various occupations, necessarily offensive in character, in thickly settled portions of large towns and cities. This class of pursuits consists of many. I shall confine the enumeration in this letter to only a few, to wit, slaughter houses, melting houses, hide houses, soap factories, manure heaps, &c., &c.; all of which are allowed in sections of this city *now* densely settled, as well as in many neighborhoods eligibly situated, and circumstanced for improvement, and rapid settlement, and only retarded by the licensed existence of nuisances of various kinds : and which constitute a very large portion of the complaints to the department of which I have charge ; particularly during the warm months. Doubtless when most of these establishments were sanctioned by ordinance, the neighborhood's were sparsely settled, and then no very strong objection was made, inasmuch as they were considered a necessary evil, and comparatively few were incommoded. The case is now widely different, and some relief by legislation seems to be demanded.

You will perceive that I apply the term nuisances, to the sevarious establishments, and to some of them the words pest house would not be inappropriate. I am aware that the word admits of a two fold definition, and that in most actions against parties accused of causing and keeping them, they get off by a sort of special pleading, and a sophistical interpretation of the word. I wish to be understood as using it in its double meaning, as noxious to the senses and detrimental to public health.

I will give you in a brief manner the plan, which in my estimation is best calculated to abate the evil : which is, that the common council shall decree by ordinance, that all occupations of an offensive character shall only be tolerated beyond a line north of 42nd street ; that they shall designate the ground upon which the necessary enclosures, buildings, &c., shall be erected ; the mode of their construction, with proper regulations for the immediate removal of offal and other offensive matter, unless used on the premises, for useful purposes in trade or science. One great advantage which would follow this concentrating of such occupations, is the fact, that much that is now allowed to rot in small establishments, in different parts of the city, and impregnate the air with offensive and unwholesome effluvia, and ultimately carted through our streets, and thrown into our rivers, would be collected and converted to various staple articles of trade, as well as used for agricultural purposes. But the greatest benefit would be realized by our citizens generally, in being permanently relieved of a noxious and sickening smell. These extensive establishments should be near the margin of our rivers ; the property owned by the city, and leased again only to persons actually engaged in some of the occupations for which the arrangement is made, and at a low and fixed rate of interest upon the investment, with proper security for payment, &c. Many other advantages might be mentioned as likely to arise from such a mode of conducting these callings, to which my time will not now allow me to allude. It is but justice to say that the plan here suggested is not original, but a similar one already exists in several European cities, and was urged by my predecessor, in his annual communication.

I am very sincerely,

Yours, &c.,

CORN'S B. ARCHER,

City Inspector.

D. E. WHEELER, Esq.

COMMUNICATIONS AND EXAMINATIONS

IN RELATION TO

Yellow Fever and the Quarantine Laws

AT THE PORT OF NEW-YORK.

1845.



COMMUNICATION FROM COMMODORE JONES.

U. S. SHIP NORTH CAROLINA, }
August 9th, 1845. }

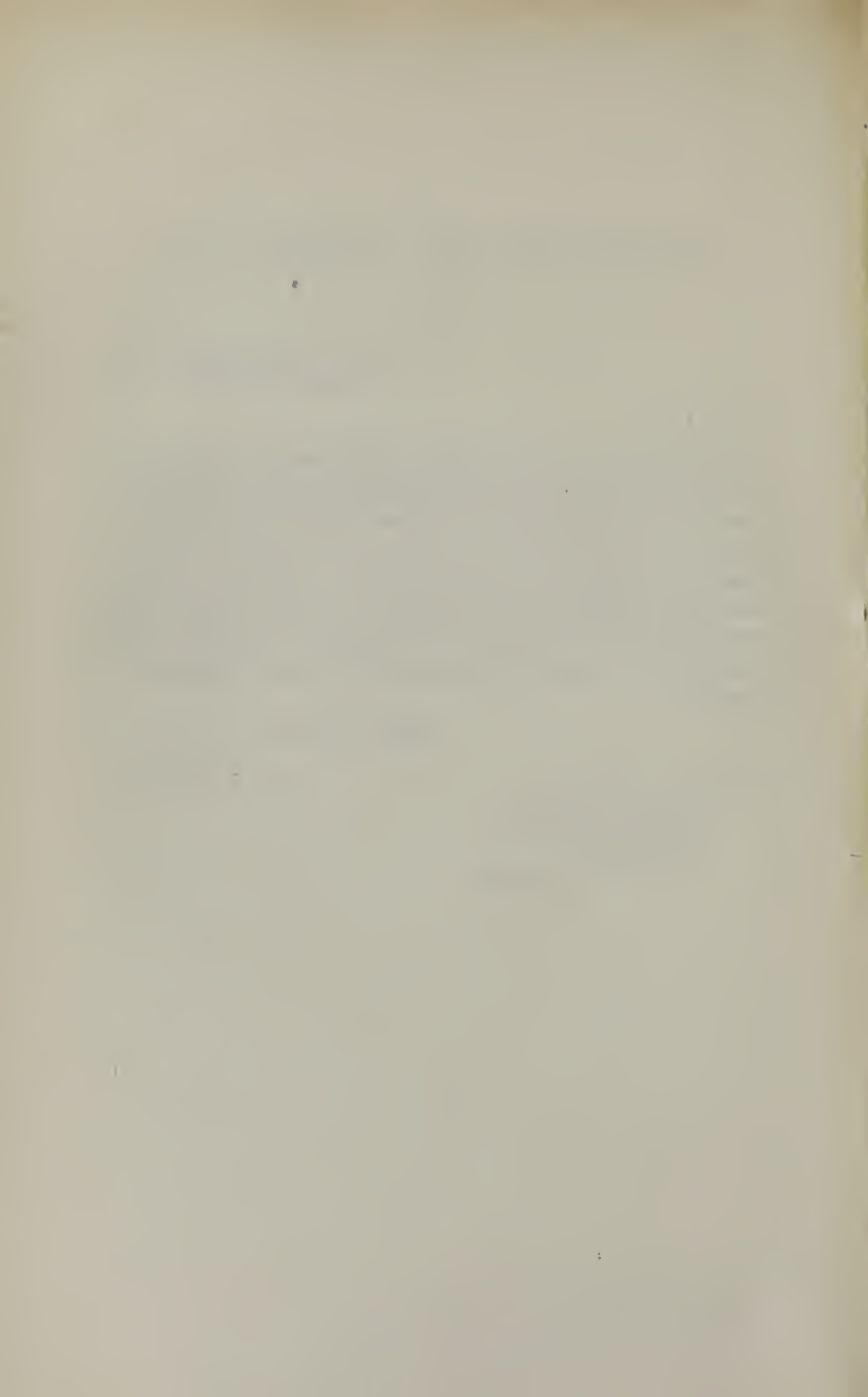
GENTLEMEN :

In reply to your communication of August the 4th, received yesterday, I have to state, that I am unacquainted with the quarantine laws of the nations of Europe, only as far as I have felt their useless effect. It is my opinion, that no vessel should be quarantined, from whatever port or climate she may come, provided the crew are in health and the vessel been eight or ten days on her passage. Should she have any sickness on board, I am of the opinion that the physician of the port could best decide, from the nature of the disease, the time and manner of the quarantine.

Respectfully yours,

JA. JONES.

TO D. E. WHEELER,
CALVERT COMSTOCK,
R. H. HINE,
Committee.



COMMUNICATION FROM STEPHEN ALLEN.

December 5, 1845.

D. E. WHEELER, Esq.

Dear Sir—In answer to your call for information on the subject of our quarantine laws, I beg leave to state, as briefly as I can, my experience and opinion on the operation of the acts of 1813 and 1823.

My experience is derived from observation during the prevalence of yellow fever in this city for several years when the disease visited us, and particularly in the years 1819 and 1822, during which I was a member of the board of health.

It is a fact, as I believe, that in no instance has yellow fever prevailed in this city, except in those years when it made its appearance at some one or more of the West India islands, or at some port to the south of us.

It is also a fact, that many instances have occurred where deaths have taken place on board of vessels after they have been under quarantine for thirty days, and undergone the purification by whitewashing, fumigations, &c., warning us of the danger of permitting such vessels to our wharves during the summer months.

It is a fact, too, that the disease, whenever it has prevailed in this city, has been confined to a particular district, and always commenced its ravages near the wharves of the city, while other parts, particularly the upper districts, have been exempt from contagion, and sick persons removed from the infected district to said parts, in no instance have communicated the disease to those attending them, or to others residing in their vicinity.

In 1819, the disease prevailed in several of the West India islands, and early in July, vessels arrived at the quarantine, from which seven-

ral of their men had died of yellow fever. The brig La Florentine, and brig Eliza, were of this description. They were placed under quarantine for thirty days, during which time wind-sails were kept in their latchways, their holds and forecastles were three times white-washed, their timbers taken out and cleaned, and they were otherwise purified, when they were allowed to come to the stream, 300 yards from the wharves. The first vessel, after all this cleansing, lost two of her men while laying in the stream, and on proceeding to sea, she also lost her captain ! The second lost her captain while in the stream, and one of her crew.

In September, 1819, the yellow fever made its appearance in the vicinity of the Old Slip, and extended its ravages to the lower part of Pearl, Water, and Front-streets. The measures adopted by the board of health, in clearing the district of its inhabitants, and fencing up the streets which led to the seat of infection, with the lateness of the season, was the cause of arresting the disease in that year.

In 1822, the yellow fever existed at the Havana, and several other places. The United States brig Enterprise arrived at quarantine on the 8th of July from Havana. She lost several of her officers and men by the disease, before her arrival, and a number after it. In June and July of that year, there had been numerous arrivals from that port, and scarcely one in a healthy condition. The commencement of the fever in this city was on the 10th of July, when two of the children of Martin Reeder, residing at No. 26 Rector-street, sickened and died of yellow fever. By this calamity, which continued its ravages from July to November, between two and three hundred of our fellow citizens were cut off from the living.

As to the origin of the disease, I presume it can hardly be denied that it was *foreign*, and not domestic. Because there is not an instance, as I believe, when the yellow fever existed in this city, that it did not prevail at some foreign place, and because it has always made its first appearance near the wharves where vessels from tropical climates resort, while the other parts of the city were in a healthy condition.

In the case of the fever of 1819, and, I believe, in all the previous cases of yellow fever, the sickness commenced near the wharf, and in that of 1822, it was at the foot of Rector-street, near the wharf, that we found the first cases of disease.

The next question is, how did it come there? In my humble opinion, by the landing of the cargoes of infected vessels. I have no positive proof, as it respects the fever of 1819, or of any of the previous fevers with which this city has been visited; but of that which raged in 1822, there was sufficient proof, both to satisfy my mind, as well as that of my colleagues of the board of health, and the health officer, Dr. Joseph Bayley, that the disease was introduced by the landing of the cargoes of infected vessels on the wharves near Rector street; the articles having been discharged from such vessels and immediately transferred to the lighters, who brought it to the city and landed it on the said wharves. I am in the possession of a document stating the transportation of cargoes from sickly Havana vessels, which sailed from that port when yellow fever prevailed there, and which were brought to this city in lighters, and landed on the wharves in the months of June and July, of 1822, amounting to 3,000 boxes of sugar, &c., brought from Havana by six different vessels, all of them discharging their cargoes in lighters at the quarantine station.

In this way the spirit of the law was violated, but, perhaps, not the letter. The words of the act of 1813, is, (see Revised Laws, 36th Session,) "The master, &c., upon the requisition, and under the direction of the health officer, shall cause such vessel to be *unloaded*, cleaned, and purified, &c." The cargo being thus unloaded and taken from the hold of the infected vessel, and placed in the hold of the lighter, no further attention was paid to it until landed on the wharves of this city. The spirit of the act intended that the cargoes of infected vessels should be landed at the quarantine; and had the health officer, Harrison, done his duty, such would have been the practice, and the city, in my opinion, saved the scourge of pestilence.

In order to provide a remedy for this evil, the then mayor, addressed a communication to the common council on the 25th of November, 1822, and recommended a revision of the health law; and, among other amendments, that all vessels arriving from sickly ports, between May and October, should be compelled to land their cargoes at the quarantine establishment, and that such cargoes shall be excluded the city until every article shall be properly ventilated, for at least twenty days after being landed, &c.

There were other amendments recommended. Lightening the restrictions in some cases, and increasing them in others, in accordance
[Assembly, No. 60.]

with the experience we had acquired during the continuance of the pestilence.

You may find, by a reference to the act of 1823, page 64, Session 46, that no part of the cargo from an infected vessel shall be conveyed to the city until twenty days after it has been landed at the quarantine establishment, or some other place out of the city, and during that time properly ventilated, cleansed, &c.

This provision, probably, is one of the restrictions complained of by those who are asking an amendment of the present law ; but, self is at the bottom of these complaints, and the question to be settled is, shall the mass of our citizens be again subject to the pestilence, with all its horrors, losses, and deprivations, to accommodate, comparatively, a few of those interested in commerce, who may be somewhat incommoded by the necessary and wholesome provisions of the law as it now exists ? I hope not.

The act of 1823 has been amended in several of its provisions ; but, not touching, as I think, the important provision I have alluded to. They are, in my opinion, of the first importance to the health of the city, and the prosperity of its inhabitants ; and as evidence of their utility, we may refer to the fact that, during the existence of the present law, we have steered clear of pestilence from the date of its enactment to the present time, and I sincerely hope an alteration of its provisions may not be recommended by your committee, or passed upon by the Legislature.

With due respect,

I am your ob't serv't,

STEPHEN ALLEN.

COMMUNICATION FROM BENSON LEAVITT,

OF BOSTON.

City Hall, Boston, Aug. 7, 1845.

Gentlemen—Your communication of the 2d instant, addressed to the mayor of the city, is at hand, requesting such information in regard to the quarantine laws and health regulations, as were in his possession.

In conformity with your request, in the absence of the mayor, who is detained from his official duties by ill health, I herewith transmit, enclosed, a copy of the city ordinance upon the subject, as the most efficient mode of communication, for the present. Any further information will be cheerfully forwarded, if you should deem it necessary; and, I can only add, that from the enclosed regulations, the city has been protected from the introduction, for many years, of any malignant or contagious diseases.

Very respectfully, yours,

BENSON LEAVITT,

Chairman of the Board of Aldermen.

AN ORDINANCE

To establish the office of Port Physician, at Boston, Mass.

Be it ordained by the Mayor, Aldermen, and Common Council of the City of Boston, in City Council assembled, as follows :

Sec. 1. There shall be appointed in the month of May or June annually, by concurrent vote of the city council, a port physician, who shall be removable by the said council, and shall hold his office until another is appointed in his place ; and who shall receive such salary as the said council may from time to time fix and determine. And in case of any vacancy occurring in the said office, the same shall be forthwith filled, in manner before stated.

§ 2. It shall be the duty of the said Physician to examine into all nuisances, sources of filth and causes of sickness which may be on board of any vessel within the harbor of Boston, or which may have been landed from any vessel, on any wharf or other place ; and under the direction of the mayor and aldermen, to cause the same to be removed or destroyed.

§ 3. There shall be provided by the city council, in the City-Hall, or some other convenient place, a suitable apartment for the said physician, free of expense to himself, and it shall be his duty to attend there, at such times as the mayor and aldermen may direct, and to vaccinate all persons, who may apply for that purpose, without charge—and he shall keep a correct record of all cases of vaccination by him performed at that place or elsewhere, and make a regular return of the same to the city council as often as once in three months ; and he shall give, without charge, certificates of vaccination, when required, to persons vaccinated by himself, or any others in a proper manner.

§ 4. The said physician shall always have on hand, as far as is practicable, a sufficient quantity of vaccine matter, and he shall supply the physicians residing in the city, with the same, without expense to them.

§ 5. Whenever any vessel shall arrive in the harbor of Boston, which is foul and infected, or whose cargo is foul and infected with any malignant or contagious disease, or any of whose crew or passengers are sick with any malignant or contagious disease, it shall be the duty of the port physician forthwith to report the same to the mayor and aldermen, and if directed by them, to cause the said vessel, her cargo and crew, or either or any part thereof, to be removed to the anchorage ground or wharf at Rainsford island, and the said vessel and cargo to be thoroughly cleansed and purified at the expense and charge of the owners, consignees or possessors of the same. And also, when directed as aforesaid, to cause all or any persons arriving in such vessel, who are sick of any malignant or contagious disease, to be removed to the hospital, on the said island, and all expenses incurred on account of such persons shall be paid by themselves.

§ 6. Whenever any vessel shall be removed to Rainsford island, as is mentioned in the preceding section, a quarantine shall be had of the same, and the port physician shall deliver a copy of these regulations to the master, and a flag to be carried by his vessel; he shall direct in what manner she shall be cleansed, and what articles shall be landed, washed, buried or destroyed; he shall direct the care and attendance of the sick, for whom he shall prescribe and supply medicine, and report to the mayor and aldermen, every day, the situation of every sick person.

* * * * *

§ 8. All vessels which shall be removed to Rainsford island, in manner before provided, shall remain there until the master shall receive a certificate from the port physician, that he may be discharged. And no person shall go on board thereof without a permit from the said physician, and in case of an unreasonable delay, *by the said physician*, in granting such certificate, the mayor and aldermen may issue the same.

§ 9. The master of every vessel discharged as aforesaid from quarantine, shall, within twenty-four hours after such discharge, deliver at the mayor's office the certificate and flag he shall have received from the port physician, and pay the sum of ten dollars.

§ 10. Any person offending against any of the provisions of this ordinance, shall pay a sum not less than three, nor more than twenty dollars, to be recovered by complaint before the justices of the police court, and, in addition thereto, shall be liable to all the penalties provided by the several acts of the commonwealth, "*to empower the town of Boston to choose a board of health, and to prescribe their power and duty,*" and also, "*an act concerning the regulation of the house of correction in the city of Boston, and concerning the form of actions commenced under the by-laws of said city, and for filling vacancies in the board of aldermen.*"

Additional Ordinance of the Port of Boston.

Sec. 1. Whenever any hides, skins, furs, rags, hair, wool, or feathers shall arrive at the port of this city, from any foreign port, between the first day of April and the fifteenth day of November, in each year, the same shall not be landed in this city, or be removed from the vessel in which either of them shall be brought, before the same shall have been examined by the port physician, and a permit be granted by him for such landing or removal.

§ 2. It shall be the duty of every master or consignee of any vessel, arriving within the time fixed in the first section of this ordinance, and containing the articles. or any of them, enumerated in the said section, to give notice of the arrival of such vessel to the port physician, in order that he may make the examination required of him.

§ 3. It shall be the duty of the port physician to attend upon all cases of disease within the city, whenever he shall be called upon by the board of health, or the overseers of the poor, and to give his professional services and advice therein, without charge.

§ 4. It shall be the duty of the port physician to attend upon all cases of disease in the gaol of the county of Suffolk, and perform all the duties heretofore performed by the physician of that establishment.

§ 5. The port physician shall keep a record of all cases of small-pox and other contagious diseases, by him attended, and of all vessels visited by him, under this ordinance, and that to which this is in addi-

tion, and of their state and condition, and report the same to the city council, once in every three months, and make such other reports to the mayor and aldermen as they may from time to time direct.

§ 6. Any person offending against any of the provisions of this ordinance, shall be liable to all the penalties set forth in the tenth section of an ordinance, entitled "An ordinance to establish the office of port physician," to which this is in addition.

COMMUNICATION FROM AUGUSTIN AVERILL & CO.

New-York, Aug. 27th, 1845.

HON. D. E. WHEELER :

Dear Sir—The particulars of the case, to which we referred in our interview with you yesterday, are as follows :

The brig *Mary*, Captain Norris, sailed from Apalachicola, Fa., about the middle of July, with a cargo of *red cedar*, and about 90 bales cotton, with which she proceeded to N. London, Ct., where she remained long enough to discharge the cedar, and then came to this place, where she was ordered into quarantine by the physician. The *cotton* was landed and came immediately to the city. The *crew* were discharged and went on shore with their luggage, and the vessel proceeded to the dry-dock, where she remained *two weeks*, coppering and repairing, when a valuable freight offering, provided she could come down to the city and take it in, we applied to the health officers, Drs. Harris and Vaché, for a permit to do so, stating fully the above circumstances, and also that there was *no sickness* at Apalachicola *when the vessel left, nor had there been any on board since*, and also that at that port vessels did not approach within three miles of the land ; notwithstanding all which, they refused to grant it, upon the ground “ *that the law gave them no discretion.*” This is but one of many cases which are daily occurring, and may serve to show the great inconvenience and loss, to which vessels are unnecessarily subjected under our present quarantine laws.

Very respectfully, yours,

AUGUSTIN AVERILL & Co.

EXAMINATION OF GEORGE MILLS.

STATE OF NEW-YORK, }
County of New-York. } ss :

George Mills being duly sworn, deposes and says, that he is upwards of eighty-two years of age ; that he has resided in the city of New-York, for the last thirty-seven years, that he was formerly the master of a vessel, and immediately thereafter engaged in mercantile business, but for some time past he has not been engaged in any particular profession or business. That he was engaged as assistant city inspector, in the city of New-York, from about the year 1817 to 1821, when he was employed as assistant to the board of health of the city, and continued in this employment until about 1825, when he was employed as an inspector of shipping, which continued three or four years. That during these various engagements for the city, he was familiar with the condition of the city, as to cleanliness and the prevalence of disease, and for a part of the time the character and condition of the shipping which entered the harbor, and of the wharves and piers. That he was well acquainted with the location of those who had the yellow fever in the city, from 1819 to 1825. That his duties required of him a personal examination of the infected districts, the persons attacked, and those who were sick as well as the dying and dead. That while the disease was prevalent in the city, he was continually watching its progress or decrease, and was familiar with its ravages and its apparent sources.

In the year 1819, the sloop Hiram entered the port of New-York, from Baltimore, and lay at the Old slip wharf. That about five days after her arrival a case of yellow fever was discovered, at No. 23 Old slip, (a sailor boarding house,) near where the sloop lay. The subject was a female, and one of the passengers in the sloop. In a few days after, other persons in the same house were taken down by the

ame disease, and from thence the disease seemed to spread, and to this source the disease of this year could evidently be traced. That I was informed at a subsequent period by the mate of the sloop, and believed the information to be true, that the sloop lay at a wharf in Baltimore, and upon the opposite side a brig, which had just arrived from Havana, from which a quantity of damaged coffee was thrown on the wharf, which was mixed with the dirt upon the wharf, and the filth and waste water from a distillery in the vicinity. Some of the passengers of the brig were sick, and some of them came to New-York in the sloop Hiram, and were sick on their passage here. The sloop lay at the wharf a few days, and then went to Hempstead Harbor, (now called Glen Cove) and a family who took passage from New-York were sick after their arrival, and were prohibited from landing.

That in the same year and in the month of September, as I think, while the ship Florentine lay in the East river, opposite Old slip, a case of yellow fever was reported to have occurred in her, and on visiting her we found a man sick, and we ordered him to the hospital at quarantine, and immediately thereafter, the vessel went to sea, and in the course of fifteen or twenty days she returned, having lost as I was informed, by the same disease, six of her crew. She shipped an additional crew and went to sea.

I was informed at the time, which information I believe to be true, that this ship was at Port au Prince two years previous, and had the yellow fever on board of her, and also a year subsequent, while at Gibraltar, and lost a good many of her crew.

That in the year 1822, the schooner Florida came to the wharf at the foot of Rector street, from St. Augustine, loaded with Havana box sugar. That the schooner took Spanish troops from St. Marx to the Havana. At the Havana the yellow fever broke out among the crew; the schooner was loaded with Havana box sugar, and returned to St. Augustine, and while there the captain and some of the crew had the fever, and without unloading, the schooner came to New-York, and came to the wharf at the foot of Rector street, where the box sugar was unloaded; and the ballast, consisting of sand, which was very foul, was thrown out on the wharf. The schooner was then thrown down to repair her bottom. They took off her garboard plank, and broke up her bottom, which was very foul indeed. While the schooner was repairing, some cases of yellow fever occurred, in

the immediate vicinity, which were the first cases in this year, and which I believe were all traceable to this vessel.

That in the month of September, in the same year, a number of vessels which were then lying at the quarantine ground, and which had been unloaded and cleansed, were driven ashore in a storm, and their bottoms broken in. That a number of persons who were engaged in repairing them were taken sick with the yellow fever.

That during my employment as inspector of shipping, but the year I cannot state, I visited a schooner, in the East river, which had been quarantined three days, from Demerara, loaded with rum and molasses. On opening her hatches an exceedingly offensive stench came from the hold of the ship. Her cargo was taken out and taken ashore in lighters. Three young men came aboard and went into the hold to cooper some injured molasses casks, and were taken sick with yellow fever, within six days, and one of them died; I knew of no other cases of yellow fever, from this source, or which could be traced to it. No passengers or any of the crew had been sick in the schooner as I know.

That during the same period, but the year I cannot state, a schooner arrived at the port of New-York, and was quarantined and was allowed to come to Brooklyn; while at the wharf, about half a mile below the Fulton ferry, I examined her and found her hold very foul, her cargo all out except a large iron boiler, which the captain wished to land at a New-York wharf, near Beach street; that the board of health allowed her to come to the West street wharf, at Beach street. That while at Brooklyn three men who had been employed in the schooner, and lived in a boarding house very near where she lay, were taken sick with the yellow fever, and soon thereafter many more who lived in the immediate vicinity, and under the bank and near the shore, were taken sick with the same disease, and about twenty died.

That my experience, without being an educated physician, or claiming to be a scientific observer of disease, has induced me to form conclusions relative to the yellow fever, which I believe will be found to be correct, in the relations of commerce, and the intercourse with various parts of the world generally conceded to be more unhealthy than places in the latitude of New-York. These conclusions have been drawn from a long acquaintance with, and the commanding of vessels,

and the visiting of various ports, and in being employed in the city, as assistant to the board of health, and an inspector of shipping. Yellow fever has existed in the city and aboard of vessels, and in both places, and in various instances, I have been with those afflicted with it, as well as those who have died by it. In my judgment it finds its way to this city by the arrival of vessels from ports on this continent in the latitude of from thirty-two degrees north to thirty-two degrees south of the equator, and from all the coast of Africa and Syria, including Muscat, the island of Madagascar, Babelmandel, Ceylon, and Batavia, in Asia; the eastern coast of the Mediterranean up to, and including Constantinople. I conceive that vessels from these places are the greatest sources of danger, and they should be carefully watched and guarded, and more especially, if the ports are sickly when the vessel leaves, or any of the crew sickly on the voyage, the vessel filthy, or the goods in a damaged state. That on the arrival of vessels from these ports, the danger of disease is from the vessel rather than from the crew, passengers, or cargo; though all may contribute to the disease if the crew or passengers are sick, or if the cargo is in a damaged state. That the yellow fever never originated in this city, and occurs only when the originating cause is brought here by vessels, people, or a damaged cargo.

There is no danger of allowing a vessel from a sickly port, if she has been absent from that port *twenty days*, coming to the wharves, if her crew and passengers are all well, and her cargo all sound. And it will be safe to have the vessel come immediately to the wharf if there was no sickness at the port of her departure in any latitude, or if her touching in any latitude, if there had been no sickness aboard the vessel, and the cargo on arrival all sound.

There is no danger of vessels coming immediately to the wharves, on their arrival from Europe, provided that there has been during her voyage no contagious or infectious disease, and the cargo is in a sound state. Vessels which arrive in a sickly state may safely be brought to the city, after being well aired and cleansed, but the passengers and crews of such vessels should not be allowed to come to the city until the expiration of 20 days after her arrival.

If a vessel is loaded at a southern port with fruits or vegetables, or animal matter, and they become damaged on the voyage, by bilge

water, and other filth in a vessel, in the warm season of the year, the crew or passengers may be taken sick, with a disease, if not the malignant yellow fever, it will approach it in character and violence. The yellow fever is not communicated by personal contact alone, but it may be by personal contact and an infected atmosphere, or by an infected atmosphere alone.

GEORGE MILLS.

EXAMINATION OF JONATHAN GOODHUE.

STATE OF NEW-YORK, }
City and county of New-York, } ss.

Jonathan Goodhue, of the city of New-York, being duly sworn, deposes and says, that he is over sixty-two years of age ; that he has been engaged in commerce in the city of New-York for the last thirty-eight years ; owned vessels and had others consigned to him from most of the principal ports in the world. That there has been a very great improvement in the building of vessels ; they are larger in size, more substantial, higher between decks, better ventilated, and more comfortable for passengers and crew, and yet there are some vessels still comparatively comfortless, but these are principally foreign vessels. That he does not now recollect ever having a vessel arrive either owned by, or consigned to him, in which there was a case of malignant or yellow fever. That the operation of the quarantine laws is a necessary additional charge upon commerce, causing delay and expense in transshipping cargoes, and sometimes injuries may occur by floods or storms, but these have not occurred to his vessels that he now remembers. That he has been to the East Indies twice, and to Europe once.

That from his experience in commerce and navigation, he is induced to believe that vessels arriving from any port known to be healthy at the time of the departure of the vessel, without any contagious disease, malignant or yellow fever on board, might safely be allowed to come to the wharves of the city at any season of the year ; but if contagious disease, or malignant or yellow fever, was on board the vessel on her arrival, he would require a rigid examination of the vessel, and the sending of all the sick to the hospital, and prevent the passengers and crew coming to the city until it should be thought safe by the health officer.

In case a vessel should arrive from a sickly port, and the crew and passengers healthy, he would require the vessel to be quarantined and carefully examined by the health officer, and not allowed to come to the city until he should be satisfied that it would be safe to have her come, and the passengers and crew not allowed to come to the city until he should be satisfied of their healthy condition, and that it would be safe for them to go to the city.

That he considers the danger of allowing vessels to come to the wharves at Brooklyn nearly as great as New-York, under similar circumstances. That he would require the captains of vessels leaving a port within the tropics, or south of or through the Chesapeake Bay, on the American coast, on the arrival of such vessels during the summer months, to furnish evidence of the health of the place of departure to the health officer, and require him to produce the certificate of consul or United States' officer, or some officer of the local government, or that of respectable merchants, that the port is healthy at the time of departure, and that he be authorised to take the evidence of the master, officers, crew, or passengers, in his discretion, to satisfy him that the place of departure was healthy.

JONATHAN GOODHUE.

EXAMINATION OF ROBERT KERMIT.

STATE OF NEW-YORK, }
City and County of New-York, } ss.

Robert Kermit, of the city of New-York, being duly sworn, deposes and says, that he is over fifty years of age, and always has resided in the city, and for the last thirty years been in business, and for the last twenty-five years a very active ship owner, and that for the last forty years has been familiar with the commerce of the city and its navigation, being familiar with the business of his father, who was also engaged in commerce and navigation, and to whose business he succeeded.

That the vessels entering the port of New-York have very much improved in their character for cleanliness and comfort, but more particularly American vessels. That the trade in which he has been engaged has been principally with Europe, and in bringing cargoes and immigrants from Europe, for many years, and believes he has himself bonded at least twenty-five thousand passengers. That he never has had, to his knowledge, a single case of yellow fever in any vessels owned by or consigned to him, which came directly from Europe. In one instance, contrary to his wishes, a captain sailed from Liverpool for Mobile, and sickness visited the ship at Mobile.

That the cabins of the vessels engaged in regular commercial business of the port of New-York, with European ports, are almost invariably as splendidly and neatly furnished and ornamented as any private parlor in any country. That the curtains, linens and bedding are of the best material, and kept in the best possible manner; and notwithstanding the character of the vessel and the cleanliness of the furniture, wardrobes and linens, the table linen and bed linen are, not unfrequently, required to be sent to the quarantine, and there washed, and after being sent for and paid, returned to the ship. This, of necessity increases the expense, is not done as well as under the direc

tions of the ships' agents, and to these evils are added the very great inconvenience and trouble it subjects the owners to. This is not unfrequently required, although every cabin passenger is well, and the ship and her furniture in good order.

That in the stowing of a cargo of any kind of grain or vegetable substance in bulk, from Europe, in the hold of a vessel, the vessel is invariably temporarily sheathed, by taking boards and nailing them to the ceiling of the vessel in a tight manner, and generally by lapping the edges of the boards, in a reverse mode to that used in shingling a house, that nothing can go down through cracks, and it is made tight; and on taking out the cargo the sheathing is generally removed.

That on the arrival of vessels having steerage passengers, during the summer months, they are put to great inconvenience, and not unfrequently subjected to expense and great exposure to their health, under the present laws. That the owner of the ship is not himself put to much additional expense, as the vessel may be cleaned and prepared to be discharged, at the quarantine, without very much additional trouble or expense, but the passengers are, not unfrequently, put upon the quarantine dock, in large numbers, and taken up in lighters, small sloops, or in some instances by a steam-boat or by vessels towed by a steam-boat, and they are hastily landed upon a dock in the city, with their luggage, without knowing where to go, and without having any temporary place for rest or the safety of their things. That in this way the passengers are, of necessity, subject to great hardship, and exposed to all the vicious influences and impositions which are found in a large city.

That he considers it perfectly safe for a vessel arriving at the port, direct from Europe, with steerage passengers, to come immediately to the wharves of the city, if on examination of the ship, by the health officer, she is found in good condition, and the crew and passengers healthy; and that this would be a very great relief to the immigrant, and in many instances be to him of very great service.

ROBT KERMIT.

COMMUNICATION FROM J. H. BROWER.

There is, perhaps, no subject in regard to which there is less diversity of judgment, among commercial men in the city of New-York, than that of the quarantine laws and regulations. The common sentiment is, that these laws and regulations are complex, onerous, and big with strictures upon the commerce and trade of the city. In this connection it should be observed, that there is no class of our community who (to say nothing of their obligations to society as good citizens) have a larger interest in the preservation of the public health, than those engaged in trade and commerce. It is but rational, therefore, to conclude, that while they desire all the unnecessary shackles to be removed from the prosperity of the community, they also ask that every proper and necessary guard shall be adopted whereby to preserve it from disease, either from abroad or at home. That it is the interest of the merchants to seek every proper guard to the public health, is evident from the fact, that, when epidemics prevail, the city becomes deserted, strangers do not visit it, and trade languishes.

But, while all needful and proper guards should be employed, to the end in view, no fictitious elements should be suffered to disturb our commerce, or embarrass our citizens in their just and lawful vocations. If these are permitted, other communities, more wise in their laws, obtain advantages which naturally would flow to us.

These embarrassments have become so obvious and widely circulated, that during our quarantine seasons, vessels cannot be procured to bring cargoes to New-York as advantageously as to our neighboring ports. This will appear conclusive from the practice under our present quarantine regulations in regard to healthy vessels and cargoes, which, after performing two days' quarantine, are permitted to come

to, and discharge at Brooklyn. Brooklyn is but five minutes distant from the city of New-York, and epidemic or contagious disease cannot pervade the one without immediately being conveyed to the other community. Many of these cargoes are discharged there during the quarantine season by stevedores, who live in the city of New-York, who go over to their labor in the morning, and return to the city in the evening of every day. New-York merchants, brokers, coopers, &c., are continually, more or less, occupied with these cargoes, which, when discharged, are permitted to be taken to New-York for shipment, or in transitu, while hundreds of New-York merchants reside in Brooklyn, considering it more healthy than New-York, notwithstanding the mass of property from southern and West India ports, always stored there during the summer months, which have never been an impediment to the growth or health of the city of Brooklyn. And yet, after a vessel has discharged a healthy cargo at Brooklyn, during the quarantine season, and has been cleansed and ventilated, she is not permitted to come to New-York to re-load until after the first of October, and these vessels are frequently thrown out of employ for months, while nothing can be more evident than if they were unhealthy at Brooklyn, it would be known as soon, and the effects as prejudicial to the health of New-York as if they were at the wharves of the city. The contiguity and almost instantaneous communication between the two cities forbid any other conclusion.

The frequent loss of employ to which vessels have to submit by this practice under the laws and regulations, fully sustains the position that vessels cannot bring cargoes to New-York during the quarantine season, on terms as favorable as to neighboring ports, where similar obstacles are not thrown in their way. And the merchants have to incur additional expenses from having to store their property across the river.

If there is any good ground for the quarantine of vessels and cargoes, it has been shown that the public health is endangered quite as much by their lying and discharging at Brooklyn as at the city of New-York itself. But there is never any objection in Brooklyn to these vessels and their cargoes, because the health never suffers from them; while, on the other hand, important benefits accrue to store-keepers, wharf-owners, laborers, mechanics, &c. &c. Although, as has been remarked, the benefits to some classes are but partial, be

cause the merchants frequently employ their New-York operatives to unlade, cooper, &c.

A material defect in the present quarantine laws would seem to be, that they invest too much power in the health officer to be reposed in one man, whose dictum involves so many and important interests. In addition to his duty of visiting and inquiring into the condition of vessels, crew, &c., he has power to determine the length of time vessels shall be subject to quarantine; to direct vessels to unload at quarantine; "if he shall judge necessary to prevent infection or contagion, may cause any bedding or clothing on board a vessel subject to quarantine, or any portion of her cargo he may deem infected, to be destroyed." In certain cases, "to order produce or merchandise to be landed for purification at the quarantine ground, or at some suitable place out of the city, subject to his orders and regulations." To require bonds with sureties subject to his approval from any person placed under quarantine," &c. &c. These powers thus conferred by law, leaves but little room for discretion in the board of health of the city of New-York, in all that relates to the quarantine regulations, while, in many cases, but little regard is paid to the interests involved, even, when the preservation of the public health does not require astringent measures.

And there would seem to be very strong reasons why an office of the magnitude and importance of this (that the incumbent, whoever he may be, should always act from disinterested motives) should be compensated by a fixed salary, and not, as at present, by fees. This remark is not made in reference to persons, but important principles, for, it cannot be denied that large fees are the natural accompaniment of a round of forms, whereby, superficially though it may be, to present the idea of their being earned, and it appears not to be doubted that much of the cumbrous arrangement of our present quarantine systems, is more necessary to sustain official fees than to guard and preserve the public health.

Among the reasons for changing the quarantine laws, it might be urged with propriety, that there is a marked improvement in the construction of vessels for the accommodation of passengers and crews. In many cases the cabins are built on deck, as well as houses for the crews, which are better ventilated and more spacious than the former un-

der deck cabins and forecastles. And the increase in size of most of our merchant ships, insures greater comfort between decks, and less liability to disease among steerage passengers. There has also much improvement taken place in the character of sailors, as regards both temperance and cleanliness, and their employers generally furnish their ships with an abundance of healthy food, and in greater variety than in former times.

It may be suggested, therefore, whether the quarantine laws cannot be divested of much of their present complex character and severity ; and in a simpler and milder form, give every security to the public health, and proper facilities to our commercial intercourse. And whether something like the following outline would not embrace a system salutary and effective, viz :

Require all vessels from ports, foreign or domestic, south of Cape Henlopen, which shall arrive between the fifteenth day of May and the first day of November, and as long before or after those periods as any pestilential or contagious disease shall have prevailed at the port of their departure, to anchor at the quarantine ground.

The health officer to visit, inspect, and report to the mayor of the city, upon each of such vessels, her crew, passengers, and cargo, within twenty four hours after she shall have come to anchor, and shall state in his report whether there is any, and if any, what objection to her proceeding to the city of New-York to discharge. In case of objection made by the health officer, which the captain or consignee of the vessel objected to, may consider unfounded or insufficient, either may notify the mayor and claim to be heard by a court, to consist of the mayor, or acting mayor for the time being, of the city of New-York, the resident physician, and a physician to be chosen from time to time by the chamber of commerce of the city of New-York, which court so constituted, shall be convened by the mayor or acting mayor aforesaid, within twenty-four hours (Sundays excepted) after notice of appeal from any objection of the health officer. The said court shall be held at the mayor's office, City Hall, and take testimony in the cases brought before them, and the decision of any two members of said court, which decision shall be made within twenty-four hours after the testimony is closed, shall be final.

If the decision of the court aforesaid shall be, that the said vessel shall not discharge at the city of New-York, it shall also decide and order how long said vessel shall remain at anchor at quarantine, and when and where her cargo shall be discharged. But the said court shall not have power to prevent a vessel from proceeding to sea again without breaking bulk, nor to require the destruction of any part of her cargo, provided the master or consignee elect to proceed to sea forthwith without breaking bulk.

Whenever a vessel anchors at quarantine from a healthy port, foreign or domestic, and such vessel, passengers, crew and cargo, are in such condition as not to endanger the public health, the mayor, upon the report of the health officer as aforesaid, shall permit such vessel to come to and unload at the city of New-York, after she shall have been at anchor 48 hours at quarantine.

Whenever a vessel anchors at quarantine from a port, foreign or domestic, at which pestilential or contagious disease prevailed at the time of her departure, and such vessel shall have been 15 days at sea, during which, if there shall have been no epidemic or contagious disease on board, and if her passengers and crew shall have arrived in good health, said passengers and crew shall be permitted to come to the city of New-York. But if the health officer shall have reasonable doubts of the propriety of landing her cargo in the city of New-York, the court aforesaid, upon hearing testimony upon the case, shall determine whether such cargo may be landed in said city or not. And if not permitted to be landed in the city of New-York, it shall not be landed in the city of Brooklyn, but at the quarantine, and thereafter, upon inspection, if found healthy, the said court or the mayor, may permit said cargo or any part thereof, to be brought to the city of New-York. Should it appear upon inspection, after landing, that said cargo contains any infection—or should there be decay in any part, such part infected or decayed so as to endanger the public health, shall remain at quarantine until such infection shall cease, and the decayed be disposed of or destroyed, as the nature of the case in the judgment of the court shall require. But nothing herein contained, shall prevent the consignee of such cargo from reshipping it *seawise* for any other port within a reasonable time, according to the nature of the case.

Whenever a vessel anchors at quarantine, from a port foreign or domestic, at which pestilential or contagious disease prevailed at the time of her departure as aforesaid, and such vessel shall not have been 15 days at sea, she shall in no case be allowed to come to the city of New-York, until her days at sea and at quarantine, shall together amount to 15 days.

Every vessel which shall be required to discharge at quarantine, shall, after her discharge, be cleansed and ventilated as the health officer may direct, and thereafter be examined by an inspector of vessels, and when found to have been perfectly cleansed and ventilated, shall be permitted to come to the city of New-York to reload.

Every vessel which shall be permitted to discharge a healthy cargo at the city of New-York or Brooklyn, may be required to be cleansed and ventilated, and thereafter to be inspected by an inspector of vessels before reloading at the city of New-York, between the first day of June and the first day of September.

Any vessel which may be permitted to come to the city of New-York or Brooklyn to discharge, may thereafter, if found in a condition to endanger the public health, be ordered back to quarantine by the mayor or court aforesaid. And the whole or any part of the cargo of any vessel which may be found, while discharging or afterward, in a condition to endanger the public health, may also be ordered to quarantine, either in the vessel in which such cargo arrived, or by lighters, as the mayor or court aforesaid may determine.

New-York, January 13, 1846.

J. H. BROWER.

City and county of New-York :

I, John H. Brower, being duly sworn, do depose and say, that I have for several years been engaged in commerce in the city of New-York, and am still so engaged, especially as consignee of vessels and merchandize from southern ports, subject to quarantine during the summer months ; that thereby, I have become acquainted with the operations of our quarantine regulations

and their influences, which I consider hurtful upon the trade and commerce of the city of New-York, and the consequences thereof have led me to the opinions and suggestions contained in the foregoing article.

J. H. BROWER.

Sworn to before me this }
13th day of January, 1846, }

D. F. CURRY,

Commissioner of Deeds,

EXAMINATION OF CHARLES H. MARSHALL.

STATE OF NEW-YORK, }
City and County of New-York, } ss.

Charles H. Marshall, of the city of New-York, being duly sworn, deposes and says, that he is upwards of fifty years of age ; that he has been familiar with ships almost constantly, from the year 1807. That he first sailed out of Nantucket, on a whaling voyage. Since 1809, all his voyages have been from the port of New-York, and from 1817 to 1834 he has been in the capacity of sailor, officer, or master. These voyages have been to New Orleans, East Indies, France and England ; and since 1834, he has been the agent of the old line of Liverpool packets, plying between this port and the port of Liverpool. That there are constantly employed in said line, eight ships ; the average passage homeward, is about thirty-four days, during the year. That the cargoes generally consist of dry goods, cotton, woollen, linen, and silk, in boxes and bales ; earthenware, in crates ; hardware, in casks and boxes ; iron and steel, in bars ; coal and salt ; copper and tin ; these articles will come ninety-nine times out of one hundred ; and rarely, if ever, fruits, except dry fruits, and then in very small quantities ; no hides, dry, salt or green ; no green hides ; sometimes potatoes, in hampers. The vessels bring both cabin and steerage passengers ; at some seasons of the year to the full extent allowed by law—two to every five tons. That the general instruction to the chief officer of the ship is, to take no passengers who are sick with any contagious or malignant disease ; and this deponent believes those instructions are followed, and the comfort and health of the passengers, on the homeward voyage, is consulted, as far as is practicable on ship board, and the vessel kept as cleanly as possible ; and the places where the steerage passengers live, are required to be cleansed every two or three days, and the vessels, as far as practicable, frequently aired. That in all seasons of the year, the climate, during the voyage from

England or France, is cool, until on the approach to the American coast ; the thermometer rarely, if ever, ranges higher than 54 degrees of Fahrenheit's thermometer ; though when coming upon the banks, there are some very hot days in the summer months. That the vessels on leaving port and lying at the docks, will accumulate bilge water, which will be offensive ; but on leaving port, and before being out three days, with the pumping which is always required, the bilge water becomes as clear as the ocean itself, and it is kept in that state during the voyage, which necessarily keeps the timbers free from filth, and prevents the accumulation of offensive air in the hold. That there have been very great improvements in the building of vessels within the last few years ; better ventilated, the comfort of the crew and passengers increased. That the spaces between the ribs of the vessel and the outside and inner planking are constantly kept full of coarse salt. Generally, no liquor is allowed, during the voyage, to the crew or steerage passengers.

That the present quarantine law requires a detention of a vessel, which is sometimes injurious to the interests of the owners, and an additional expense for pilotage and steamboat towing : but it is the severest upon the emigrants, requiring them, in its practical working, to be landed at the quarantine dock, then to be brought up to the city by open lighters, generally propelled by wind, and subject to be becalmed, and to all weathers and to all hours, night as well as day, and landing upon docks in large numbers, and then imposed upon by mercenary persons, who take advantage of their ignorance, and make their situation not unfrequently desolate, but subject them to the worst influences of a crowded city. That this would be avoided, if the passengers were allowed to come immediately to the city in the ships, as they would be protected from the weather, and not be under the necessity of finding an immediate shelter for themselves and their children, often numerous and young.

That in the opinion of this deponent, the vessel, on her arrival, should come too at the quarantine ; be visited by some one from the quarantine department, and examined ; and if any are sick on board, they should be taken from the vessel, and if a contagious disease is on board, then, that such a course should be adopted as to secure the citizens from such disease ; but, on finding the vessel cleanly, the crew and passengers free from contagious disease, or infectious or malignant fevers, that she, her cargo, and passengers, should be

allowed to come to the city ; and that there can be no more danger of allowing vessels coming to any wharf of New-York, than at Brooklyn.

That the piers and wharves are more cleanly than formerly ; still, that there is room for further and greater improvements, which would add to the security of the city from disease.

That vessels from New-York, on their arrival in England or France, are not quarantined, or subject to visitation by health officers, but the vessels allowed to come immediately to the docks, although, it not unfrequently happens, that from one to two hundred steerage passengers go from this port to England. Vessels were visited by health officers in 1822, when the yellow fever was in this city, and examined, until after the board of health declared the city free from the disease, and on finding the crew and passengers healthy, then the vessel was allowed immediately to come to the docks.

CHARLES H. MARSHALL.

EXAMINATION OF WILLIAM WHITLOCK, JR.

STATE OF NEW-YORK, }
City and county of New-York. } ss.

William Whitlock, junior, being duly sworn, deposes and says, that he is over fifty years of age, and has always resided in the city, with the exception of temporary absence, and been in business for himself for twenty-seven years, and largely engaged in foreign and domestic commerce, and for the first ten years, principally in the southern business. That during that time, he has had vessels consigned to him from almost every important port in the world, and with cargoes of almost every kind of merchandize known in commerce.

That during the period spoken of, vessels have been improving in their size, height between decks, their ventilation and comfort to the crew and passengers, which contribute very much to their health and to the cleanliness of the vessel. That the size of the vessel, gives vastly more room to the crew and passengers and makes the hold of the ship, and the between decks more airy, and much more healthy. That the character of sailors has very much improved, and the almost universal disuse of intoxicating liquors aboard ship, has contributed very much towards the diminution of the common fevers, as well as those of a more malignant character.

That during the time he has been engaged in commerce and navigation, he has found the quarantine regulations more burdensome to commerce, in his judgment, than was necessary for the preservation of the health of the city, and in some instances, he has no doubt that sickness has been caused by detaining vessels at the quarantine, and subjecting the passengers to an unnecessary exposure.

That the ship Alfred sailed from Liverpool, England, in the early part of the season, for Mobile, and arrived there May 20, 1843; that
[Assembly, No. 60.]

she was a large ship, and was obliged to anchor in the river, about 15 miles below Mobile, and there discharged her cargo, excepting a thousand bags of salt; took in a cargo of cotton and sailed for New-York on the 17th day of June, 1843. Mobile at that time being healthy, and the crew had been well on the voyage, and were well on the arrival of the ship on the 7th of July; the ship and cargo were in good order and were permitted after examination by the health officer, to come to the city after two days of quarantine, and discharged her cargo, consisting of cotton, &c. &c.

The ship *Formosa*, arrived at Apalachicola from Liverpool on the 3d of June, 1843, and lay about 15 miles below the town, in the stream, and there took in a cargo principally of cotton, Apalachicola being healthy at the time, and sailed for New-York on the 23d of June, 1843, and arrived at New-York on the 13th day of July, 1843, the cargo being in good order and the crew having been well during the voyage. The ship on her arrival was quarantined, but allowed to come to Brooklyn and there discharge her cargo, but not allowed to come to New-York until the first of October. That the additional expense to the ship and owners of the cargo, was at least one hundred dollars, in addition to the injury of not allowing the vessel to come to the city. Requiring her to be loaded at Brooklyn, caused an additional expense of at least two hundred and fifty dollars. That during the summer of 1845, in consequence of being required to land the steerage passengers at the quarantine, he lost merchandize from one vessel to the amount of at least nine hundred dollars.

The ship *Hogarth*, arrived at New-Orleans from Liverpool November 16, 1843, and sailed from there June 7, 1844. Arrived at New-York July 2d, quarantined two days, went to Brooklyn and discharged cargo, but not allowed to come to the city until 1st October.

The ship *Splendid*, sailed from New-York the 15th of June, 1844, arrived at Mobile bay July 24, and sailed for New-York on the 15th of August, and on arriving at quarantine Sept. 9th, was then obliged to discharge her cargo, and kept there until October 1st. In each case the crew was healthy, and the cargo in good order.

That steerage passengers from Europe, during the summer, being required to land at quarantine, are subjected to greater exposure than if allowed to come to the city on ship board, by being exposed to all weathers, in all hours, upon the decks of open lighters, and to be land-

ed in a strange city, in great haste, and to being imposed upon by strangers who are willing to sacrifice all honorable principles to obtain some of the funds the immigrant brings with him to our shores. That he considers this requisition worse than useless, and that it might be avoided by allowing a vessel from Europe to come immediately to the city, when the crew and passengers should be found healthy by the inspection of the health officer.

That he does not remember ever to have had a vessel arrive in the port of New-York with a case of malignant or yellow fever on board, although instances of the sickness of sailors have occurred during the voyage, and when the vessel arrived.

That he should consider it perfectly safe for any vessel, at any season of the year, from any port which is healthy at the time of the departure of the vessel, with a crew and passengers healthy during the voyage and on arrival, and the cargo in good order, to come immediately to the wharves of the city after an examination by the health officer ; and that a vessel under the same circumstances, and arriving under the same circumstances, but from a port unhealthy, might safely come to the city if she has been absent from a port for twenty-days ; but if there have been cases of malignant or yellow fever on board, that then the vessel, crew, passengers and cargo, should be quarantined until the health officer should be satisfied of the safety of the vessel in coming to the city. That he considers the law, when based on latitude, is unwise ; because, in the same latitude, some ports are healthy, and others sickly, and that the health officer, or some other officer, should be the judge as to the safety of allowing the vessel to come to the city ; and that he should be required to insist upon clean bills of health, the examination under oath of the officers, crew or passengers, as he might deem necessary, to enable him to possess himself of all the necessary information.

That from his experience and knowledge in commerce and navigation, he has no doubt whatever, that the present quarantine regulations drive from the city of New-York, vessels, goods and merchandize, which would otherwise come to it.

WM. WHITLOCK, Jr.

EXAMINATION OF EDWARD ROCHE.

STATE OF NEW-YORK, }
City and county of New-York, } ss.

Edward Roche, of the city of New-York, being duly sworn, deposes and says : That he is over forty-five years of age, and has been engaged in the business of commerce and navigation, as one of the firm of Roche & Brothers & Co., and principally as agents for immigrants from England and Ireland for the last eight years, and is now thus engaged ; that the vessels in which the immigrants come are generally larger and better ventilated than formerly, and are more comfortable, and that the average number of immigrants in each vessel is from 100 to 400, and sometimes even more, in large ships, during the summer months.

That upon the arrival of the vessels at the quarantine, there has to be paid for the immigrant fifty cents hospital money, and he is required to be landed in the summer season on the dock of the quarantine, and brought from there in lighters, being generally small sized sloops or schooners. Last season, in addition to those lighters, a steamboat was used to bring up passengers ; and they not unfrequently reach the city at night, and the passengers are, in my opinion, very liable to sickness or exhaustion from this exposure and fatigue. And they are not unfrequently imposed upon in various ways, in consequence of not being able to come to the wharves of the city in the ship.

That not unfrequently immigrants become sick soon after arrival, which is produced on ship board, or by the great exposure on board the lighters, and then they are not allowed the benefits of the hospital which they have contributed to establish and maintain.

That the vessels might be allowed, if there is no malignant or contagious disease on board, to come to the city immediately on their arrival, with all their passengers on board, without endangering the health of the city, and the evils, in a great degree, to which the immigrant is now subject, be removed. It is desirable that the owner of the ship, or consignee, should allow the immigrant to remain on ship board for at least twenty-four hours after her arrival, and then they could engage for themselves comfortable homes or passages west, without the imposition they now suffer. Before leaving the ship, they should be carefully examined by some medical man from the quarantine, in the presence of the consignee or ship owner, or their agent, and if found sick with any disease, allowed to go to the quarantine hospital any time within two weeks after the arrival of the vessel.

That vessels arriving at quarantine having sickness on board, but not malignant or yellow fever, should have all the sick removed to the hospital, and the ship, and the passengers who are well, allowed to come immediately to the city in the ship.

EDWARD ROCHE.

EXAMINATION OF SIDNEY MASON.

STATE OF NEW-YORK, }
City and County of New-York, } ss.

Sidney Mason, of the city of New-York, being duly sworn, deposes and says, that he is over thirty-five years of age ; a native of Massachusetts, and resides in the city of New-York, and has resided in the city for the last six years ; is engaged in commerce and navigation, and now has vessels, either owned by him and those connected with him in business, or consigned to him, from almost every port in the world. That he has resided 17 years at St. Johns, Port au Rico, and was United States consul at that port for seven years, under the administration of Gen'l Jackson ; that he has visited most of the West India islands, also, the Spanish main, Carthagena, St. Amarthia ; which visits were generally in the warm season. That he has visited most of the ports in the Mediterranean, those of Spain, Holland and Germany. That his acquaintance with these ports has given him an opportunity of personally observing many cases of yellow fever, and other diseases incident to the climate of these ports. That ever since he was twelve years of age he has been connected with commerce and navigation, in some way, and from his experience and observation he is satisfied that the character of American vessels has very much improved ; that they are much larger, higher between decks, of better model, made more comfortable for the sailor and the passengers, and better ventilated. They are navigated with a less number of men than vessels of any other country ; our vessels are navigated with $\frac{1}{2}$ the number of men that the French vessels require, $\frac{7}{8}$ and $\frac{3}{4}$ that the English require. The sailors are better cared for in every respect, better fed, better clothed, and better housed than formerly, and much less subject to disease. That there has been improvements in the vessels of other countries, still not equally so with American ; they are not kept as clean or airy, and are more liable to the diseases incident to a life aboard ship.

That the ports in the warm latitudes have been very much improved, they are kept more cleanly and not as subject to the diseases incident to a warm climate ; that this improvement has been so great, that the quarantine of vessels leaving the Spanish ports has been lessened by various foreign powers. That while the ports in the West Indies have been improving in cleanliness, the port of New-York has remained stationary, and in his judgment the port of New-York is now more filthy than any port in the West Indies.

That vessels arriving at the port of New-York during the summer months, are, consequently, less liable to bring any contagious disease, or malignant or yellow fever.

That during his whole commercial life he has had constant intercourse with hides, coffee and all kinds of colonial produce. That he has carefully watched the effects of these articles upon the health of his clerks, laborers, seamen and passengers, and from his long experience he is satisfied that hides or coffee are not the source of malignant disease or yellow fever ; they are often offensive to the smell, but not injurious to the health. That he has seen hides in all stages, sound, partially injured, and utterly ruined, and never known a case of malignant or yellow fever result from handling them, unaccompanied with a prior disease in the crew or passengers. That during the year 1832 he had a vessel, entirely laden with coffee, stranded during the hurricane of that year, in July, which was submerged for ten days ; that the coffee was finally brought on shore in a very offensive state, dried and put up to be used for coloring purposes. That during the process of drying, small parcels of it were constantly carried away and used among the poorer classes. That during the two or three weeks occupied in drying it, the laborers who constantly worked among it, were well, and not a single instance of sickness in those who took the coffee could be traced to its use.

That he has not unfrequently had vessels consigned to him which were infected, and these vessels were either from the coast of Africa or from some port in the Brazils, and generally loaded with rice or farina, and when these became damaged, and mixed with molasses, dissolved sugars and bilge water, with the additional influence of climate, then the greatest danger is to be apprehended from the malignant or yellow fever.

That vessels coming from the coast of Africa, or the Brazils, to the West Indies, leaving part of their cargo, and taking molasses and sugars, and then sailing for New-York, are, in his judgment, the most dangerous vessels which arrive at our port, except, perhaps, vessels in which the yellow fever, or some malignant fever, has actually manifested itself.

That clean vessels, arriving at the quarantine, with a healthy crew and passengers, from a healthy port, in any country, except Africa, or in latitudes between 20° south and 20° north, he would allow to come to the wharves of the city at any season of the year; but require a clean bill of health to be signed by an American consul, or other officer, and empower the health officer to examine the captain, crew or passengers, under oath, as to the condition of the port of departure, and the health of the crew and passengers, and the voyage which the vessel had made, and the ports at which she had touched, provided she had touched at no unhealthy port, or been upon the coast of Africa, during the voyage.

That vessels from a sickly port, with a healthy crew and passengers, he would not allow to come to the city, until the health officer should be satisfied that it would be perfectly safe.

SIDNEY MASON.

MOSES TAYLOR'S EXAMINATION.

STATE OF NEW-YORK, }
City and county of New-York, } ss.

Moses Taylor, of the city of New-York, merchant, being duly sworn, deposes and says, that he is over thirty-nine years of age, and has been engaged either as clerk or for his own account, twenty-four years in commerce, and principally in the West India trade; and has had at least two vessels on his own account running regularly to the Island of Cuba, and has had constantly at the same time vessels consigned to him for the last 13 years from some one or all of the West India islands.

That the general cargoes of the vessels bound to New-York from the Islands, consists of sugar, coffee, molasses and tobacco; sometimes fruit on deck, but in small quantities. That sometimes the sugar comes in boxes, sometimes in hogsheads; when in boxes, they are strapped at the ends and in the centre of the box with a strip of dry hide, about half an inch in width.

That during the summer months, each vessel will average about twenty cabin passengers, consisting of gentlemen and their families coming to the United States to spend the summer; rarely, if ever, steerage passengers.

That he does not remember ever to have known any passenger to arrive in any vessel consigned to him or owned by him, sick with a malignant or yellow fever.

That the average passage of a vessel from any of the Islands is from 8 to 12 days; that they visit on their homeward passage no port, except when obliged to make port from some casualty incident to the ocean.

That he has had his vessels subject to the quarantine laws, and had them unloaded and loaded at the quarantine ground. That the additional expense of unloading a vessel at quarantine, of the usual character and size of the ordinary vessels in this trade, will average two hundred and fifty dollars; and if the cargo is put into store at the quarantine, it will increase this sum to at least one thousand dollars, in addition to the delays and dangers incident to such regulations; and that the additional expenses of loading vessels at quarantine, is about the same as that of unloading—or it may be a little more, as no calculation can be made as to the storage, as the quantities or qualities of goods to go aboard are not known before they come on ship-board.

That in consequence of these laws, freights at the quarantine-season of the year are not easily obtained for New-York, as consignees or owners of goods and merchandize send them to Boston or Philadelphia, or to other American ports, where the cargoes are not subject to such heavy charges and great delays.

That vessels required to go to the wharves at Brooklyn are subject on their cargoes to about one-half of the expenses at the quarantine ground, and when there the vessels are generally unloaded, loaded, cleansed and repaired by persons from New-York, who pass to and from the city of New-York daily, by the ferries, or in the lighters which take the goods to or from New-York.

That there have been very great improvements in the building of vessels for the comfort of the crew and passengers,—they are better ventilated, and kept more cleanly; the officers and crews are more temperate.

There is not as much sickness among the crews as formerly; indeed, they are now rarely sick, which is doubtless owing to their more temperate habits, and to their being bettered cared for.

That in the judgment of this deponent, vessels coming from the West India islands should bring a clean bill of health, and a certificate that the port of departure is healthy, signed by an American consul, and the vessel, on her arrival, should be subject to inspection, and the officers, passengers and crew should be examined under oath by the health officer, or so many of them as he might deem sufficient; and if there is not sickness at the port of departure, and none on board

the vessel during the voyage, the cargo sound, and the vessel clean, that no evil can possibly result from allowing the vessel to come to the wharves of the city, and that no evil can arise from such a vessel coming to the city, even if the port of departure is sickly, if the crew and passengers have been healthy during the voyage, and the cargo on board sound, and the vessel clean, and in good order.

MOSES TAYLOR.

EXAMINATION OF WILLIAM NELSON.

STATE OF NEW-YORK, }
City and county of New-York, } ss.

William Nelson, being duly sworn, deposes and says, that he is upwards of forty-five years of age, and is agent for Holmes' Line of Packet Ships from New-York to New-Orleans; that he has been in the business either as clerk or agent for over seventeen years; that said line has constantly from four to seven ships in the trade between New-York and New-Orleans; that the birth of said ships when in the port of New-York, is at the foot of Maiden Lane.

That all of the ships are what are called first class ships, and the passage of said ships from New-York to New-Orleans, or from New-Orleans to New-York, is from fifteen to eighteen days, and when not affected by the present quarantine laws, the ships are loaded and unloaded at some one of the wharves in the city, or at the wharves at the ship's berths.

That the cargoes from New-Orleans generally consist of cotton, tobacco, sugar in hogsheads, molasses, lard, flour, lead, wheat, corn, hemp, wood, salt, dry hides, flax seed, salt pork and beef, buffalo robes, and peltries.

That the ships, rarely, if ever, have any ballast in the hold on leaving New-Orleans, that being supplied by the cargo. That on the arrival of any vessel in this line of ships at Staten Island, if she is quarantined and obliged then to be discharged, the additional charge is borne by the owners of the cargo, and not by the owners of the line, and that the charge upon the goods in addition to the freight, will ave-

rage, upon each ship, from two to three hundred dollars, which variation is caused by the quantity and quality of the cargo.

That after the discharge of the cargo, and the vessel is permitted under the present law, to come to any of the wharves at Brooklyn, or to lie in the stream, three hundred yards from the wharves in the city of New-York, the additional expense of loading the vessel for her outward passage, beyond that incident to loading her at the New-York wharves, will average, on each vessel, about two hundred and fifty dollars.

These additional expenses are beyond the loss which the line sustains from the longer time it occupies in loading and unloading the vessel.

The men usually employed to load the vessel at Brooklyn, are residents of the city of New-York ; go to Brooklyn in the morning, work during the day in the ship, which is not allowed to come to New York ; and in the evening they return to their homes, which they left in the morning.

That freights from New-Orleans to New-York are much lower immediately before the first of June, from the great anxiety of the officers or owners to avoid the oppressiveness of the quarantine law, which obliges him to ride out a quarantine if she leaves New-Orleans after the first of June, and from the fear not only that the vessel will be quarantined, but the cargo landed at quarantine.

And, in addition to this evil, sometimes vessels even leave before getting a full freight, expressly to avoid this arbitrary rule. This is a great burden upon vessels in the New-Orleans trade, and in this particular, in the opinion of this deponent, the law might be amended with safety to the health of the city.

This burden, the deponent believes, will average at least five hundred dollars to each vessel.

Vessels in this trade, as well as almost all American vessels, have improved. They are larger, better ventilated, higher between decks, more comfortable for the crew and passengers. The health of the crew is less liable to be injured from exposure and the want of comforts, and the disuse of intoxicating liquors on ship board, has taken

away one great cause of sickness among sailors. Intoxicating liquors are universally prohibited in the Holmes' Line of New-Orleans ships, and the same is true of very many vessels which arrive at, and depart from New-York.

WILLIAM NELSON.

EXAMINATION OF WM. W. DE FOREST.

STATE OF NEW-YORK, }
City and county of New-York, }

William W. De Forest, of the city of New-York, being duly sworn, deposes and says, that he is over forty years of age ; that he was a sailor four years ; that he now resides in the city of New-York, and has resided in the city twenty seven years, and been engaged in foreign commerce during that time, and principally in the South American trade, although there is scarcely a port in the world with which he has not had some commercial relation. That he has owned or had consigned to him cargoes of almost every description. That there is a vast improvement in vessels in their construction, ventilation, height between decks, cleanliness, comfort of the crew and steerage passengers, in their food, and almost universal freedom aboard ships of the use of intoxicating liquors ; all of which add very much to the health of the crew and passengers. That he has had vessels consigned to him from all the ports in the West India islands, Port au Prince, Vera Cruz, all the ports on the Spanish main, Barbary and Demarara, and all the southern ports of this Continent ; that he has had vessels arrive with sickness on board, but remembers no case of a vessel owned by him, or consigned to him, arriving with the yellow or malignant fever on board. That he considers the improvements in vessels, and the whole management of the vessels and crew, very great preventives to the bringing to the port any malignant diseases.

That the present quarantine laws are not unfrequently prejudicial to the interest of the owners of vessels or cargoes, and the passengers, by obliging the vessel which is from a healthy port, and all on board healthy, to be detained, and the requiring of passengers to be landed at the quarantine. That he thinks the interests of commerce would be subserved, and the health of the citizens protected, if a vessel

were allowed to come to the city, if on inspection she is found clean, her cargo sound, and her passengers and crew healthy.

That he considers it perfectly safe for vessels arriving at the port of New-York, from any port within the tropics, or any of the southern ports of the United States, the port of departure being healthy, the crew and passengers healthy during the voyage, and on their arrival, aud the cargo in good order, to come immediately to the city.

That if the port of departure is sickly with a malignant disease, or yellow fever, the crew and passengers healthy on arrival, and during the voyage, and the cargo in good order, then the vessel might safely come to the city at any time within twenty or thirty days after leaving such port.

WM. W. DE FOREST.

EXAMINATION OF GEORGE B. DE FORREST.

STATE OF NEW-YORK, }
City and County of New-York. } ss.

George B. De Forest, of the city of New-York, being duly sworn, deposes and says, that he is over thirty years of age, and has resided in the city of New-York for the last twenty years, and been engaged in commercial business, and for the last three years in commerce and navigation; and is now one of the firm of Benjamin De Forest & Co., which house has been established as a commercial house for the last twenty-five years, and been very largely engaged in the West India business, and the principal article of importation has been sugar, in hogsheads, although we have had frequent consignments of molasses.

That the vessels in this trade have been improved very much in their character; they are a better class of vessels, larger, better ventilated, the crew better cared for, made more comfortable, freer from the evils of intemperance, and not as subject to the diseases incident to a tropical climate as formerly. The vessels make a voyage from the West Indies to this port in about fifteen days, and do not usually bring many passengers, although not unfrequently they have from one to eight or ten. That the house of Benjamin De Forest & Co. trade principally with St. Croix and Port au Rico, and usually have from forty to fifty arrivals a year from these ports. That the port of St. Croix is considered a very healthy port, and the island is visited very much by invalids from northern latitudes for their health. That Port au Rico is also considered a very healthy port.

That he has never known a case of yellow fever on board of any vessel consigned to the house of which he is a partner, or of any case which was directly or indirectly occasioned by such vessel. That dur-

ing the summer season, the house is put to very large expense, or the owners of goods or vessel, by being required to have the vessels quarantined and ordered to the wharves in Brooklyn. That during this last summer the single item of lighterage, which was additional to the ordinary expenses incident to the trade, without the quarantine restrictions, amounted to over \$1000, and that amount is about the average additional annual expense of lighterage, for the last fifteen years.

That he considers this expense unnecessary, and so far as this house is concerned, actually thrown away.

Besides this large amount of actual expenditure, there is the loss of time, and expense attendant upon having goods stored at a distance from the place of business.

That the experience of his house in the West India trade, and the long freedom of their vessels in this trade, from any contagious, or infectious, or malignant disease, induces him to believe that it would be perfectly safe for the health of the city, to allow the vessels from St. Croix and Port au Rico, at any season of the year, to come immediately to the wharves of the city, on being examined by the officer at the quarantine, and found in good condition, the crew and passengers well, and the port of departure at the time healthy.

GEO. B. DE FORREST.

EXAMINATION OF CHRISTOPHER R. ROBERT.

STATE OF NEW-YORK, }
City and county of New-York, } ss.

Christopher R. Robert, of the firm of Robert & Williams, doth depose and say, that he is over forty years of age, and for many years his house has been engaged in trade between New-Orleans and this city, and rarely has a season passed without great inconvenience and loss being experienced from the operation of the quarantine laws ; and as illustrating the inconsistent nature of the sanitary regulations now in force, this deponent makes the following statement of facts, some of which he knows from his own personal knowledge, and others he believes to be true. Some years ago an application was made to allow a quantity of coffee to come to the city ; it was denied by the board of health, merely because if granted the board would be called together too often, to decide upon similar cases. As an instance of the very slight grounds on which vessels are sometimes subjected to 30 days quarantine, and large portions of their cargoes sent into public store at Staten-Island, the following case is cited : The schooner Waldoboro sailed from New-Orleans on the 23d June, arrived at this port on the 8th July, and was ordered to discharge at quarantine, but the cotton allowed to come to the city. The schooner Eclipse sailed from the same place on the 22d June, arrived at quarantine on or about the 13th July ; was quarantined 30 days, and the cotton sent into public store, although she sailed before the vessel the cargo of which was allowed to come to the city. The health officer, when inquiry was made as to the reasons for making this difference between these two vessels, stated, that subsequent to the arrival of the first vessel named, and prior to the arrival of the second, he had heard that the yellow fever had broken out at New-Orleans, and when asked as to the evidence that such was the fact, said that the captain of a small vessel, that sailed on the 19th, and his passengers, said the fever was there, and the captains of three or

four schooners, recently arrived, had confirmed the accounts. The strongest evidence he had, however, was an affidavit of one of the passengers in the vessel that sailed 19th June, who made oath that the "yellow fever was there, or heard it was there, and *saw a great many hearses about the streets.*"

On such slender evidence as this was the commerce between two of the most important places in the Union shackled with regulations nearly equivalent to non-intercourse, burthened with onerous charges, and the parties engaged therein subjected to great inconvenience and loss, by the detention of the property, *merely* because a few passengers and masters of small vessels reported that yellow fever prevailed, which was contradicted by information from parties at New-Orleans of undoubted character.

Both of the above named vessels arrived without any cases of sickness on board during the passage.

Some time in the summer of the ship arrived from Calcutta, having a quantity of hides on board ; a portion of them could not be got at so as to be landed at quarantine, and the doctor allowed the ship to come to the wharf in this city, and the hides to be sent in lighters to Brooklyn. The consignee of the hides sent a lighter from the city, which, on going alongside, found a lighter there from the quarantine ground, with a *peremptory* order from the doctor to take them out.

These cases are cited as specimens. Many others might be given, shewing the inconsistent and arbitrary administration of the quarantine laws.

Further this deponent saith not.

C. R. ROBERT.

EXAMINATION OF J. M. WOODWARD.

STATE OF NEW-YORK, }
City and county of New-York, } ss.

Jabez M. Woodward, of the city of New-York, being duly sworn, deposes and says, that he is over forty years of age, and resides in the city of New-York, and engaged in shipping, both foreign and domestic ; that he has had a large number of immigrant passengers arrive at the port of New-York, in his vessels, at all seasons of the year, but principally during the summer months ; that these passengers are principally from Great Britain, Germany, and Norway, and come to this port directly from Liverpool or Bremen ; that on their arrival at the quarantine ground during the summer months, the vessels are visited by the health officer, and when there are over forty passengers, they are required to be landed at the quarantine dock, baggage examined, and then put aboard lighters and sent to the city. That each vessel generally brings from fifty to four hundred passengers.

That immediately upon the vessel coming to the quarantine, and after the passengers are landed upon the quarantine dock, the bunks which form the frame for the beds of the passengers, are broken up, and the passengers deprived of every place of rest until they arrive at the city, as the lighters in which they are brought are small schooners, having no room for them in the hold, and consequently they are exposed to the storms and the hot sun of the season, and to the suffering incident to living temporarily aboard a crowded boat in calms, and they frequently do not arrive at the dock in the city until night, and they are therefore subject to, and suffer from, the impositions of those into whose hands they are unwittingly thrown by persons interested, to make as much money as possible from their ignorance, credulity, and want of capacity for taking care of themselves.

That the evils which the immigrant suffers from these sources are very great, and often very expensive, the loss of portions of his baggage, the injury to his morals and health, and not unfrequently, the means which he otherwise would expend in going himself and taking his family to the country, where he might make a good and useful citizen, are taken from him, and he and his family subjected either to be supported by the city, or by those who have become bound to save the city harmless from such support.

That this detention of the vessel often subjects the owner to the expense of lighterage, and not unfrequently to the towing up to the city the vessel itself.

These evils might be very much lessened by allowing the vessel, after inspection by the health officer, to come to the city with the passengers, if found healthy, and the vessel required to allow the passengers to remain on board for 48 hours after her arrival.

That he has never known a case of yellow or malignant fever aboard any vessel consigned to him. Sometimes there are cases of smallpox; and when there are, the health officer should determine as to the safety of the vessel coming to the city with the passengers.

J. M. WOODWARD.

EXAMINATION OF ANDREW PATRULLO.

STATE OF NEW-YORK, }
City and county of New-York, } ss.

Andrew Patrullo, of the city of New-York, being duly sworn, deposes and says, that he is over forty-three years of age, and has resided in this city for the last twenty years, and has been engaged in navigation and commerce for the last fifteen years, and principally in the trade with Yucatan, embracing Sisal and Campeachy. That a vessel is consigned to him at least every sixty days, and every month he receives by other vessels goods from those ports. That the cargoes consigned to him from there, and articles generally received, are principally grass hemp, and log-wood, and sometimes raw hides, salted, or perfectly dry. Sometimes there will be in a quantity of hides forty or fifty which may be injured by being wet, and then they are very offensive, and make those which are otherwise in good order offensive.

The port of Sisal is healthy, and during his trade with that port he has never known an instance of yellow or malignant fever among the crew or passengers aboard the vessels from that port, or of any which could, in the remotest degree, be traced to that port.

That his knowledge of Campeachy is not so perfect, and he cannot speak with confidence in relation to its general health, as his business is chiefly with Sisal. That there is no danger of disease from the grass hemp, as it dries immediately on coming to the air and sun, and none whatever from logwood, but he is always fearful of hides, if in bad order, in the heat of summer.

That he should consider it perfectly safe for a vessel coming immediately from Sisal in the summer months, to come to the city,

if she has no hides on board, or other damaged cargo, with a healthy crew and passengers, leaving Sisal when there is no sickness there.

That when cargoes are required to be landed at quarantine, the delays, exposure of goods, and additional expense, is very great, not unfrequently goods are damaged and sales lost.

A. PATRULLO.

EXAMINATION OF ALONZO G. REYNOLDS.

STATE OF NEW-YORK, }
City and County of New-York, } ss.

Alonzo G. Reynolds, of the city of New-York, being duly sworn, deposes and says, that he is over thirty-five years of age ; that he has been for the last five or six years and is now engaged for others in the shipping business, with foreign ports ; and for the last two years, he has been intimately acquainted with the effect of the quarantine law upon commerce ; that during that time he he has known of vessels arriving from Marijore, St. Domingo, which is a very healthy port, and rarely if ever visited with the yellow or malignant fever ; and from its universal healthy character, vessels can be chartered to go there during the summer months, at least one hundred and fifty dollars cheaper, than scarcely any other port in that latitude ; that the cargoes shipped from that port are chiefly log-wood, very rarely anything else ; never, except in small quantities, and that coffee. That on the arrival of vessels from that port, when healthy, the crew and passengers, if any, all healthy, with a cargo of logwood, are subject to quarantine ; the cargo of logwood is put aboard lighters and taken to Brooklyn, there stored at an additional expense to the owner of the wood, of from fifty to seventy-five cents a ton ; that the several cargoes will average from one hundred to two hundred tons.

That from his knowledge of the ports in this latitude, he should judge it perfectly safe to allow vessels direct from Marijore, Cape Haiti, Port au Platte, Jeremie and Jacamel, to come immediately to the city, if the officers, crew and passengers, are well, the cargo in good order, and the place healthy at the time of the departure of the vessel, provided a clean bill of health is furnished from the consul or accredited commercial agent residing at the port. And at the same time, the health officer should have power to examine on oath, the officers, crew and passengers, if he deems it necessary.

ALONZO G. REYNOLDS.

EXAMINATION OF JOHN I. BOYD.

STATE OF NEW-YORK, }
City and county of New-York. } ss.

John I. Boyd, of the city of New-York, being duly sworn, deposes and says, that he is over fifty-five years of age, and has always resided in the city of New-York, and has been engaged in commercial pursuits, ever since he was fifteen years of age, and given a great deal of attention to the subject of yellow fever ; has had the disease himself, twice. That the conclusion to which he has arrived from his experience and acquaintance with navigation, is, that it is perfectly safe for the health of the city, to allow vessels at any season of the year, with a cargo in good order and a healthy crew and passengers, to come immediately to the wharves of the city, if the port of departure of the vessel is healthy, wherever that port may be, or in whatever latitude ; but in case the port of departure should be unhealthy, then the vessel should be subject to a quarantine, similar to that now required by law.

J. I. BOYD.

EXAMINATION OF JAMES T. TAPSCOTT.

STATE OF NEW-YORK, }
City and county of New-York, } ss.

James T. Tapscott, being duly sworn, deposes and says, that he is over twenty-eight years of age ; that he is one of the firm of W. & J. T. Tapscott, in the city of New-York, and engaged in the business of bringing immigrants to the city of New-York, and been engaged in the business for the last eight years ; that they bring to this port from six to eight thousand immigrants a year, and the vessels bring from two to five hundred each, and they mostly arrive in the summer months.

That the vessels have been greatly improved for the comfort and health of the passengers. The vessels are of a larger class, higher between decks, better ventilated, and better suited for bringing many persons on board ; and the immigrants are not as subject to disease as they otherwise would be.

That the present quarantine laws operate oppressively and injuriously to the passenger, in the opinion of deponent,—requiring him to be landed at quarantine dock, and be brought up to the city in open lighters, subjecting the passengers to have themselves and their baggage taken in lighters from the ship to the docks, and from the docks in lighters to the city. That they are not unfrequently exposed to storms or the violent heat of the sun, to be out a part, if not all night, by calms or adverse winds, without any place for sleeping, without the conveniences for food as aboard ship, and to the arriving in the city at all hours, seasonable and unseasonable, and to be taken to places improper for rest, or to those where advantages will be taken of their ignorance and necessity, and they led into bad habits, subject to bad influences, and imposed upon by persons who are found in a great city, by pretending to engage for them passages west at a cheap price,

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when, in fact, they are not authorized to make any contract for passage, or if authorized, charge higher prices than those charged by respectable and responsible canal or steamboat lines.

That during his business relations in this business, he has never known a case of malignant or yellow fever among the immigrants on ship-board on their arrival, and believes it would be perfectly safe to the health of the city, and that it would not be in the slightest degree jeopardized by allowing these vessels, if found healthy, to come to the city at any season of the year.

That if the vessels were allowed to come immediately to the city, the immigrants would have time to make the arrangements which their destination might require, and at the same time have a comfortable place to sleep aboard-ship, and enjoy the comforts of their usual food. They would be enabled to make more economical and better arrangements as to passage and food in going west, or if to remain in the city, to find better and more comfortable homes.

That the evils they are now subjected to are very great, and not unfrequently very burdensome either to the city, or to the owners of the ship or the consignees.

JAS. T. TAPSCOTT.

EXAMINATION OF JOSEPH M'MURRAY.

STATE OF NEW-YORK, }
City and County of New-York, } ss.

Joseph McMurray, of the city of New-York, being duly affirmed, affirms and says, that he is over forty-five years of age, that he has resided in the city for the last twenty years, and been engaged largely in the business of bringing foreigners to this country, from Europe, excepting for a very short time. That the number of immigrants has very much increased, so that he now brings from eight to fifteen thousand passengers to the port of New-York, in the course of twelve months, and they arrive in vessels having on board from one hundred and fifty to four hundred each.

That the vessels in which these immigrants come are very much enlarged, higher between decks, better ventilated, and the accommodations and means of comfort of the passengers increased and they are consequently not as subject to sickness as formerly.

That on the arrival of the vessels prior to the first of June and after the first of October, the passengers are allowed to come in the ship immediately to the wharf at which the ship lies. That about one-fifth of the passengers who arrive are sent for by friends, and consequently on their arrival the consignee of the ship knows where to send them. All the passengers are allowed to remain on board the ship, and the bunks for their comfortable sleeping allowed to remain up for at least twenty-four hours after the arrival of the ship, that they may be able to make such arrangements for their future destiny as they or their friends shall judge best, and this is done without any exposure to the public health or morals.

That the same might be the case in all the summer months with perfect safety to the health of the city, because at all seasons the vessel is visited by the health officer, and if any one is found sick on board, he is in all cases, where he wishes, or the health officers so elect, sent to the quarantine hospital. That the voyage from Liverpool is, on the average, about thirty-five days.

That the quarantine law, when enforced, requiring all vessels which have over forty passengers on board to land them at the quarantine ground is very injurious to the health, morals, and property of the immigrant.

That immediately on the arrival of the vessel at quarantine, a communication with the shore is commenced, the passengers have frequently spirituous liquors, fresh provisions and fruits brought on board, which often make sickness on board, the passengers are taken to the docks of the quarantine, frequently in large numbers, and without any one to control or protect them, they are subject to imposition, and are very frequently imposed upon by pretended agents, or runners of boarding houses, canal and railroad lines, and others.

They are taken on board of small schooners, carrying about two hundred each, although the same schooners would not be able to carry over fifty if it should come on to blow and be rough, there being no room for them in the hold or under deck, and all being obliged to remain on deck exposed to the intense heat of the sun, or to storms or to the night air.

That not unfrequently it is made the interest of those having the management of these schooners, to make the trip from the quarantine to the city, long, that the immigrants may be landed at some particular wharf in the city, and be under the necessity of going to some particular place for the night, and be subjected to all that man may be induced to impose upon them, to get their money without giving them an equivalent.

That instances have come to deponent's knowledge where a dollar and a dollar and seventy-five cents has been charged for a miserable lodging, and on the expenditure of the last sovereign, immigrants have been turned into the street, when if they had been honestly treated and properly directed, they would have been able to have found a com-

fortable place for rest, with a sufficiency of money to have carried them into the interior, where they were destined, and been freed from the vile treatment they found on their first landing in this asylum for the oppressed, and made good citizens instead of inmates of our hospitals or asylums.

J. McMURRAY.

EXAMINATION OF WILLIAM L. ROY.

STATE OF NEW-YORK, }
City and county of New-York. } ss.

William L. Roy, of the city of Brooklyn, being duly sworn, deposes and says, that he is over forty-five years of age, that he has been secretary of the United States immigrant society for the protection of English and Scotch immigrants, for the last three years. That these societies were formed principally to protect the English or Scotch immigrants from the frauds practiced upon them on their arrival in this country. That the resident English and Scotch, were made conversant with so many evils and frauds committed upon their countrymen, that they deemed it an act of humanity to protect them on their arrival ; and in saving their own countrymen from these evils, they ascertained that other immigrants also suffered from similar causes, and their efforts have also been directed to relieve the Irishman, German, and indeed, all who sought the free institutions and liberal views of this country, and a freedom from the oppressions of the old world ; and for similar purposes, other societies have been formed in the city, and all done more or less for the relief of the ignorant and oppressed, the sick and the poor, as they come to our shores. This examination has enabled the benevolent to discover evils incident to the present quarantine laws, and the citizens who have associated themselves for the benevolent purpose of aiding their friends or strangers, find that the law is now, in many respects, oppressive, and might be remedied with safety to the health of the city, and at the same time add to the happiness of many objects of humanity, and keep the stranger from the ills incident to the operation of the law as it now exists. The property of these individuals, is often unjustly taken, their morals injured, their health destroyed, and they not unfrequently prevented from becoming good citizens by being driven from the correct channels of citizenship, to the waywardness and crime of dissipation, poverty and despair.

That on the arrival of vessels from Europe with steerage passengers, during the summer months, they are required to remain at quarantine, land their passengers, and they be brought to the city by lighters. That this subjects the immigrants to be sent to the quarantine dock immediately, and the bunks for the sleeping of the passengers are immediately broken up, and the passengers to be taken from the dock in open and uncovered lighters to the city or interior. That in the crowding of great numbers at a time, and the necessity of having their baggage examined in great haste, often baggage is lost, the passengers out without a shade in a hot sun for a long time, or exposed to the night air, rains and storms, without any comfortable place for rest, and without food ; and landed at a wharf in a strange city, at all hours, which creates the necessity of engaging lodgings without any judgment, or passages west, and paying for them without knowing to whom the money is going, or whether they will be justly credited therewith, or if credited with what is paid ; whether the price paid is not exorbitant. These ills, necessary to a just performance of duty, are very great ; but when enhanced by those which the cupidity of man devises, they become so severe, that Heaven calls for relief.

Persons are allowed to go on ship-board, the lighters, and on the wharves in the city, who make representations which prove to be false ; lead the immigrant into houses in the city unfit for man to live in and they require exorbitant pay ; or take money for the transporting the immigrant west, and give worthless tickets for a passage, or charge a very much larger price than the actual charge by respectable and responsible lines of steam or canal boats. Cases, which come under the evils above enumerated, are very frequent and very grievous, and the fact that some vessels arrive with from three to five hundred passengers each, and together bring to our port from 60 to 80,000 immigrants annually, and they principally in the summer months, make the evils not only great in individual cases, but enormous when looked at in the aggregate.

That he has been conversant with the landing of passengers for eight or ten years, though not engaged in the business or interested in it except as in acts of benevolence ; and during this experience he has never known any cases of malignant or yellow fever among the passengers, and he therefore thinks that these immigrants might be allowed to come to the city at any season of the year, on the arrival of the ship, provided no malignant or yellow fever is found to exist.

That this would allow the passenger, if going west, a resting place on ship board, until he could engage properly his passage west, or if he intends to remain in the city, to obtain a comfortable place temporarily to rest. That the owners of the ship or consignee, would be interested to provide well and properly for the passengers, and the friends of the immigrant in the city could with greater facility carry out their benevolent intentions to the stranger who seeks a home in the land of the free. If cases of sickness or exhaustion should occur, such cases should be immediately removed to the quarantine hospital, and the immigrant have the opportunity of enjoying what his money and that of others theoretically intend to provide, a good hospital: whereas now, the moment the immigrant passes the quarantine ground, that moment he is prevented from any of the benefits of that asylum for the sick immigrant.

WILLIAM L. ROY.

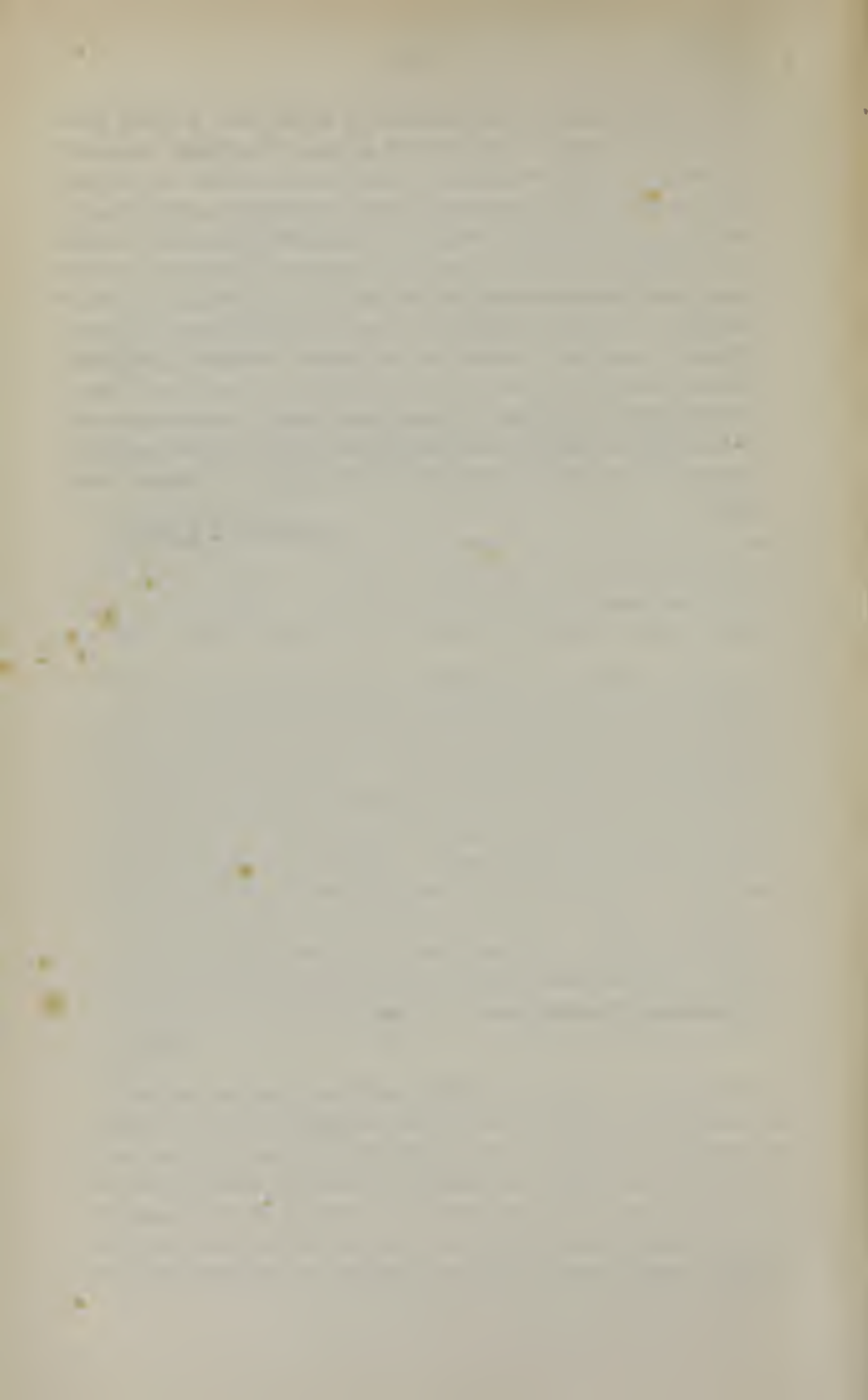


TABLE No. 1.

A Table showing the population of the city of New-York
at various periods, from 1696 to 1845, inclusive.

Year.	Population.
1696,	4,302
1731,	8,628
1756,	10,381
1773,	21,876
1786,	23,614
1790,	33,131
1800,	60,489
1805,	75,770
1810,	96,373
1815,	100,619
1820,	123,706
1825,	166,086
1830,	202,589
1835,	270,089
1840,	312,852
1845,	360,719

TABLE No. 2.

A Table showing the population in the various wards of the city of New-York in 1840 and 1845.

<i>Wards.</i>		1840.	1845.
First	ward,	10,629	12,130
Second	"	6,406	6,962
Third	"	11,581	11,900
Fourth	"	15,770	20,000
Fifth	"	19,159	20,362
Sixth	"	17,199	19,343
Seventh	"	22,985	25,556
Eighth	"	29,093	30,900
Ninth	"	24,795	30,907
Tenth	"	29,093	20,990
Eleventh	"	17,052	27,259
Twelfth	"	11,678	13,374
Thirteenth	"	18,516	22,411
Fourteenth	"	20,230	21,103
Fifteenth	"	17,769	19,422
Sixteenth	"	22,275	30,350
Seventeenth	"	18,622	27,147

TABLE No. 3.

A Table showing the Deaths in the city of New-York by Smallpox, Yellow Fever and Cholera, from 1805 to 1845, both inclusive.

Years.	Smallpox.	Yellow Fever.	Cholera.
1845	413	....	....
1844	20	....	....
1843	117	....	....
1842	181	....	....
1841	209	....	....
1840	232	....	....
1839	68	....	....
1838	91	....	....
1837	164	....	....
1836	173	....	....
1835	351	....	....
1834	233	....	971
1833	25	....	....
1832	89	....	3513
1831	224	....	....
1830	176	....	....
1829	16	....	....
1828	93	....	....
1827	149	....	....
1826	58	....	....
1825	40	....	....
1824	394	....	....
1823	18	1	....
1822	....	240	....
1821	....	3	....
1820	....	....	....
1819	....	23	....
1818	19	....	....
1817	14	1	....
1816	179	....	....
1815	94	....	....
1814	2	....	....
1813	2	....	....
1812	21	....	....
1811	117	....	....
1810	4	....	....
1809	66	13	....
1808	62	....	....
1807	29	....	....
1806	48	....	....
1805	62	270	....

TABLE No. 4.

A Table showing the population of Brooklyn from 1800 to 1845, both inclusive.

1800,	3,298
1810,	4,402
1820,	7,175
1825,	10,790
1830,	12,042
1835,	24,529
1840,	36,233
1845,	59,574

TABLE No. 5.

A Table showing the arrivals of vessels at the Port of New-York from Foreign Ports, from 1839 to 1845, inclusive.

1839,	2,159
1840,	1,953
1841,	2,118
1842,	1,960
1843,	1,832
1844,	2,208
1845,	2,044

The number of vessels which have been required to discharge their cargoes at quarantine, will average, for the three last years, THIRTY-THREE vessels a year.

TABLE No. 6.

A Table showing the number of Passengers from Foreign Ports since 1827, (no record being previously kept,) and also the number of Patients treated, &c. in the Marine Hospital, since 1799.

Year.	Number of foreign passengers arriving at the port of New-York.	Number of patients admitted into the Marine Hospital.	Number of deaths in the Marine Hospital.	Cases of typhus or ship fever.	Remittent and bilious remittent.	Intermittent.	Yellow fever.	Smallpox.	Infectious and malignant fever.	Malignant cholera.
1845	82,960	....	....	....	....	....	....	....	....	....
1844	61,002	....	....	....	....	....	....	....	....	....
1843	46,302	....	....	....	....	....	....	....	....	....
1842	74,949	....	....	....	....	....	....	....	....	....
1841	57,337	*	....	....	....	....	....	....	....	....
1840	62,797	830	65	144	93	111	3	135	....	....
1839	48,152	750	57	80	144	93	25	66	....	....
1838	38,213	400	23	6	89	71	4	59	....	....
1837	51,677	1,100	79	518	150	49	...	64	....	....
1836	58,597	724	64	100	189	73	5	68	....	....
1835	32,716	526	60	46	196	66	2	57	....	....
1834	46,053	463	47	41	145	58	3	67	....	....
1833	39,461	448	63	72	178	48	12	55	....	....
1832	38,815	447	53	99	90	48	1	35	....	27
1831	14,821	526	43	27	105	75	...	96	....	....
1830	9,127	506	59	24	131	45	2	90	....	....
1829	15,036	393	27	...	125	55	4	16	....	....

TABLE No. 6—Continued.

Year.	Number of foreign passengers arriving at the port of New-York.	Number of patients admitted into the Marine Hospital.	Number of deaths in the Marine Hospital.	Cases of typhus or ship fever.	Remittent and bilious remittent.	Intermittent.	Yellow fever.	Smallpox.	Infectious and malignant fever.	Malignant cholera.
1828	19,958	311	36	13	46	68	1	10	...	...
1827	10,412	439	51	4	134	96	6	35	...	...
1826	489	49	28	74	167	2	22	...	...
1825	319	44	6	85	83	2	13	...	...
1824	362	37	....	61	85	28	4	...	...
1823	391	47	1	68	128	8	22	...	...
1822	454	90	3	115	87	103	...	...	...
1821	340	46	5	81	84	26	...	...	...
1820	308	28	1	69	119	2	...	...	...
1819	303	43	25	71	83	26	...	...	...
1818	222	23	13	34	46	5	16	...	...
1817	312	48	20	82	65	41	14	...	...
1816	243	45	6	39	50	2	57	...	...
1815	262	39	55	53	54	19	22	...	...
1814	5	....	....	4	....	...	...	...	...
1813	19	4	....	5	....	1	1	...	...
1812	27	6	5	8	5	1	...	...	...
1811	84	20	21	27	10	8	...	...	...
1810	95	11	....	20	25	5	...	...	...
1809	115	18	....	45	29	6	...	...	...

1808	....	107	19	....	15	25	35	....	....	....
1807	....	132	24	2	39	15	3	....	....	....
1806	....	136	20	3	39	27	2	....	....	....
1805	....	209	54	6	52	35	43	6	....	....
1804	....	159	24	6	46	19	8	7	7	....
1803	....	257	83	....	36	24	141	1	....	....
1802	....	325	43	41	24	36	7	....	....	....
1801	....	944	198	15	35	8	35	19	703	....
1800	....	234	45	2	61	30	36	11	1	....
1799	....	348	98	....	28	13	163	....	69	....

* The blanks in this Table since 1840 are not filled, and consequently that part is deficient.



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